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Toxemia of Pregnancy.*

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Mr. President and Gentlemen: I regard the subject of toxemia of pregnancy as the most far reaching and important one that the science of obstetrics has offered to the medical profession as a whole. It is entirely a product of the present century; text-books written three and four years ago have not a chapter with that title, and I will say in passing, that its influence has extended far away from the subject of obstetrics, and it has had its effect in clearing up a great many other important subjects in general medicine and even in surgery. Unfortunately the term, toxemia of pregnancy is used too frequently as a specific term, as though there were a specific toxemia of pregnancy, and only one. As a matter of fact, there are a number of toxemias of pregnancy, as for instance kidney toxemia, liver toxemia, thyroid toxemia, intestinal toxemia, and others of unknown origin. However, as generally accepted nowadays, the term toxemia of pregnancy is understood to indicate a toxic condition of the blood in pregnancy resulting in lesions in the liver similar to those of acute yellow atrophy. At the present time, unfortunately it is also supposed to include eclamp-

*Stenographic report of address before Jefferson County Medical Society, Feb. 11, 1907.

sia as well as acute yellow atrophy, but I believe that these two subjects ought to be studied apart. Dr. Williams, of Johns Hopkins University, and Schmorl, a German observer, have both demonstrated that in addition to the well recognized differences in symptoms and prognosis between eclampsia and this liver toxemia, there is a constant difference in the pathology of the two diseases.

Since the time that Bouchard, the great French worker, did his first work on autointoxication, it has been known that all pregnant women have toxemia, that is, a given amount of their blood is more toxic to a guinea pig than an equal quantity of the blood of a well woman. Now the burden of neutralizing these toxins of pregnancy falls upon the liver, and if she happens to have a congenital or an acquired insufficiency of this antitoxic function of the liver, there is an accumulation of toxins in the blood, and the symptoms of toxemia appear.

Now, those symptoms pursue a course, gradually becoming worse, as a rule, until delivery, and then there is usually a quiet period of perhaps 24 hours, when all the symptoms become worse, and in the bad cases the woman dies. Here is seen the most striking difference between eclampsia and acute yellow atrophy. The latter condition, 24 to 48 hours, after delivery gets worse, while the tendency of eclampsia is to get better a few hours after delivery.

Now, the symptoms, you are all probably familiar with; the great important symptom is vomiting. If the vomiting occurs early in the pregnancy, the third or fourth month, it is classed as a separate clinical type, as it dominates the entire clinical picture. If it occurs in the early months, it is apt to be confused with the benign type due to reflex or neurotic influences, but that is not so apt to be the case in the later months. Headaches and neuralgia pains are common symptoms. Air hunger is a very important symptom. It was present in eight of the nine cases that have come under my observation. Dribbling of saliva from the mouth is a pretty constant symptom. However, it is not always present in toxemia and is present in some cases, which are not toxemia. The same may be said of albumen, which may, or may not

be present in the urine. Absence of albumen does not mean that the patient is not in a toxemic condition, nor does its presence mean that the condition is toxemia. It is apt to be present, however. Now, in the study of the urine, there is another change that is quite constant, and that is evidences of disturbed metabolism. The nitrogen excreted as urea is much decreased, while that secreted as ammonia is enormously increased. It is known that the normal amount of ammonia in the urine is from three to five per cent.; in the toxemia of pregnancy it may be 40 per cent. Williams claims that if the ammonia passes 10 per cent., it is time to interfere. I do not think this ammonia test has received all the endorsement that it deserves. Its accuracy has been questioned by the New York men, especially the Cornell school, Dr. Edgar and Dr. Ewing, but there is no doubt that it is based on sound experimental evidence, although that fact has not been brought out sufficiently. The physiologists know that if a part of the portal blood is deflected from the liver by means of an Eck fistula between the portal vein and vena cava the same changes occur in the urine as Williams finds in toxemia of pregnancy, that is the ammonia rises and the urea falls. If the liver is cut out of circulation entirely by ligature of the hepatic artery and of the portal vein on the liver side of the Eck fistula, practically all of the nitrogen is excreted as ammonia, and little or none as urea.

It seems to me that this is sufficient to show that you are bound to expect the change in the ratio between urea and ammonia, provided you have got insufficiency of the liver, as you have in toxemia of pregnancy. Unfortunately the test is somewhat complex, and is only available where the services of a chemist can be had. I wish to say in this connection that I have spoken to Mr. J. C. Long, a chemist here, and he says that he will be glad to make these tests; that is his profession, and I do not think he would charge any more than the ordinary fee for the examination. And personally, I am sure that I shall avail myself of his services the next time I have occasion to.

Now a word about the pathology. It was Virchow, I believe, who first divided the liver lobule for pathological purposes into three zones,

the central and the middle zone, and the peripheral zone, and he showed that certain pathological processes are prone to attack different zones. Now, the vast majority of toxemia cases examined post mortem show a central necrosis, or at most, a central and mid-zonal necrosis, leaving the peripheral zone free. On the other hand, Schmorl found in his 135 autopsies on eclampsia cases that the central zone and the middle zone were practically normal, while the peripheral zone showed necrosis, more or less pronounced. He went on to give as the cause of this necrosis that thrombosis of the small vessels in the interlobular spaces first occurred, and the necrosis was secondary to that. Williams endorses that view and corroborates it in every way, but he stops there, and gives no further explanation. The same thromboses are found in the brains and the lungs, in cases dying of eclampsia.

In regard to the prognosis of this type of liver toxemia. Now, in this grave type, the prognosis depends pretty much on whether the woman goes through pregnancy or not. It is grave at the best. But there is one other point I wish to mention about the tendency of these cases to get worse and die after delivery, regardless of the time of pregnancy. For instance, a woman at seven months may begin to have symptoms of toxemia of pregnancy, and she may go on and on, as sick as she can be, and yet go to nine months, and whether delivered in a natural way, or artificially, she will likely die within three days afterwards. The same thing will occur if she is delivered at the seventh month, or the eighth month, or any time, provided her condition has reached the grave stage. It seems that the liver is just able to take care of the toxemia, in its crippled condition, and that something occurs after delivery that acts as a last straw on the camel's back, and breaks down the liver, and it goes out of business, and death occurs. There has been too little attention paid to that feature. I regard it as of the most supreme clinical importance, and it seems to me that there is very little reason to doubt that the cause of this tendency to die after delivery is that some new supply of toxins enters the circulation. Where do they come from? You would naturally think at once of the involuting uterus. Now, there is an organ that loses 500 grams in weight in seven days, and that

loss of weight is almost entirely represented by waste products thrown into the circulation to be excreted by the kidneys, and there you have your post-partum increase of the toxemia. Moreover, it has been asserted by P. A. Lawrence, of New York, who has written the most comprehensive article on autolysis that I think has ever appeared in America, that involution of the uterus is nothing more nor less than a process of autolysis, so that you have the same kind of products thrown into the circulation that the liver is already producing by its self-digestion.

Now, there is very little reason to doubt that this is true, and if it is, it teaches a valuable lesson in the way of treatment. You have got not only to interfere with that pregnancy when you think that the woman has stood all that she can, but you have got to do it before that, because you have got to allow for this additional supply of toxemia after delivery. There are two courses of treatment, the palliative and the radical. The palliative treatment, by diet and eliminatives, will, in a certain proportion of cases, give fairly good results. A woman will frequently get better, but all too often, it is deceptive, and the crisis is only postponed, to return at a later date in aggravated form. I have seen it. I have seen women pursue a perfectly normal course, under palliative treatment, after having grave symptoms of toxemia, and after two or three months a sudden change occurred, and the condition became worse than before. And this, together with the post-partum increase in the toxemia, coming from the involuting uterus, has led me to occupy a pretty radical position on this subject. I will say that I believe that it is just as urgent to deliver, to induce labor in a woman, where you have made the diagnosis of toxemia of pregnancy, as it is to operate in a case of ectopic pregnancy. It is just as urgent to remove the fetus from the uterus in the former as it is to remove the fetus from the abdomen in the latter.

Now, a word as to the manner of inducing the labor,—of terminating the pregnancy. If it is an early case, abortion can be completed at one sitting, if the symptoms are not grave, and that is a question to be decided by the attendant, but if they are, if the woman is in a low condition, it should be induced by an operative procedure.

Chloroform should never be used in a toxemia case, on account of its tendency to cause the same liver changes as the toxemia. Later on, in the later months, the same holds good,—that labor is to be induced if you have time, without anesthetics or, if an anesthetic is necessary, ether is to be used, or better, spinal anesthesia. All of the inhalation anesthetics are liver poisons, especially chloroform, and it is always necessary to use a toxic dose of an anesthetic to induce complete anesthesia.

If the case is very far advanced, some obstetric operation will have to be done, and it is best to use the one you can get through with the quickest. The question of the caesarian section for advanced toxemia has been brought forward in the last year or two. It has been advocated by many.

I will only say that while I would hesitate to endorse this procedure on a toxemia patient, if it should for any reason be deemed necessary to remove the foetus through the abdomen the uterus should be removed at the same time, not for the purpose of preventing future pregnancy, but in order to get rid of the involuting uterus as a post-partum source of toxins.

The Use and the Abuse of the Forceps.*

By H. N. Rosser, M. D.
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Wm. Chamberlin was perhaps the first doctor to use the obstetric forceps in the year 1596. He had two sons, both named Peter, with whom he left the secret. To Hugh Chamberlin, grandson of the younger Peter, must we give the praise of having given the secret to the world from 1664 to 1728.

The forceps may be used as a tractor, rotator, compressor, dilator, lever, (Chosagny) or irritator. The most important function, however, is that if traction. In a few cases it may be used as a rotator, especially in occipito-posterior positions. It should not be used as a compressor, though slight compression is always attained when using

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forceps. Other instruments are more appropriate for this. As a dilator it should not be used. Dilatation should be made with the hand. As a lever or irritator it may sometimes be used, but it is seldom necessary, anesthesia rendering its use as such of no avail.

Indications for use of forceps: Anything which may jeopardize the life of mother or child. On the part of the mother, may be mentioned, eclampsia, heart lesions attended by broken compensation, acute oedema of lungs, hemorrhage from premature separation of placenta, intra-partum infection or exhaustion. In exhaustion we can not take the statement of the patient or friends in this condition, but must after a careful observance of objective symptoms be our own judge; the condition of the pulse will be the best criterion by which to go. Other maternal indications for forceps delivery, acute infectious diseases—heart complications, diseases of the respiratory tract, cicatrices incident upon a recent abdominal section. Making it advisable as far as possible to relieve the exhaustion incident upon the second stage of labor.

Most frequent cause of the need of forceps—faulty contraction of uterine or abdominal muscles—occasional rigidity of perineum. In uncomplicated cases of labor it is a conservative obstetric procedure to apply the forceps after two hours if head does not advance and one hour if head is resting upon perineum—even if strong pains do supervene, it is not advisable to wait much longer.

As regards the child. Prolapse of the umbilical cord, premature separation of placenta, undue pressure exerted upon the head and especially by changes in the rhythm of its heart beat and escape of meconium in vertex presentations—below 100 or exceeding 160 beats to minute if not delivered will die. In vertex presentations meconium in amiontic fluid shows that the circulation is interfered with consequently imperfect oxygenation and manifesting itself in paralysis of the sphincter ani. No significance in breech presentations.

Before application of forceps the child should present correctly: 2. The cervix must be fully dilated or dilatable. 3. The membranes should be ruptured. 4. The head of the child should not be too large or too small. 5. The pelvis should not be contracted.

Child should present by vertex or face. Accurate diagnosis is necessary as to position and variety; forceps is not available when the chin is directly posterior. Not applicable to transverse or shoulder presentations, nor is it intended to be applied to the breech. It should not be applied to brow cases until after conversion into vertex or face.

The cervix should be dilated to 9 to 10 centimeters; can be introduced in half that dilation although it is dangerous. If prompt delivery become imperative before complete dilatation, dilate (Harris method) and apply forceps if the head is deeply engaged, but if only partially or floating use podalic version. The membranes should always be ruptured.

Preparation for operations: Place patient on a bed or table, and produce complete anesthesia. Bring the buttocks to the edge of the table or bed. Cut the hair, wash thoroughly with alcohol and bi-chloride of mercury 1-1000 solution. Disinfection of vagina is not necessary usually. Legs and body and arms should be covered. If outlet be small and rigid, dilate with hand. Catheterize if necessary. Support legs with leg holder.

Application is made when child is low, middle, high or floating. It is low when presenting part rests upon the perineum, or lies below the line joining the ischial spines; middle when it presents at or just above ischial spines; high, when the head has partially descended into the pelvic canal, but its greatest circumference has not passed the superior strait.

When the head is freely movable above pelvic brim the operation is turned forceps on the floating head.

In low forceps delivery there is little difficulty. Middle is more difficult. High is always difficult and should not be attempted without being imperatively demanded by condition of mother or child. Floating head forceps delivery is rarely needed.

Middle forceps operations. Sagital suture usually occupies an oblique or transverse diameter of the pelvic canal. Apply forceps to side of head, left occipito-anterior positions. Left hand branch of forceps held in left hand. The blades being locked, one blade of forceps oc-

cupies the posterior and the other the anterior extremity of the left oblique diameter. If the head is in left transverse position there is a similar procedure. In this case one blade of forceps lies in front of sacrum and the other behind symphysis.

In right positions reverse the order.

Make traction downward, etc.

When occiput is obliquely anterior it gradually rotates spontaneously to symphysis, but when transversely necessary to rotate to bring it to front.

Application of forceps in *R. O. I. P. and L. O. I. P.* seize head with four fingers over posterior ear and thumb over anterior, and attempt made to rotate occiput to a transverse position. It is usually easily accomplished, sometimes there is rotation to an anterior position and then forceps is applied as before described. If this procedure fails what then? In these positions it will be necessary to apply one blade of forceps over the brow of foetus and the other over occiput, for if one blade were applied over face and the other over the occiput the blades would not lock while if one blade were applied over forehead and other over occiput there would be a constant danger of instruments slipping with consequent danger to child. With foetus grasped by blades of forceps in these positions it will be necessary to rotate and in the right position to the left, and in the left conversely, otherwise the face will be anterior thus complicating termination of labor; recollecting that in one 135 degrees will have to be traversed while in the other only 45 degrees. Yet in the greater space traversed there is less danger to the mother.

Use downward traction and when rotation has been completed it will be found that the forceps blades will be antero-posterior, in the position the forceps should be removed and reapplied to side of head and delivery completed. I always apply forceps to side of head except as above stated using my forefingers, or if necessary, introducing my entire hand as a guide finding posterior ear and introducing first blade, without removing hand, to side of head. Smellie, I think, was the first to suggest this method.

High forceps delivery is to be avoided if possible. Yet at times the procedure becomes imperative and recollecting the maternal pelvic curves we can readily appreciate the difficulty of delivery in these positions. Saxtorph (1772) suggested attaching a heavy tape to the fenestra of each blade of forceps and making traction downwards and backwards, and also grasping handles of forceps with both hands making counter pressure, known as Pajots' method, but Saxtorph recommended the procedure 44 years before Pajots birth.

It was not until Tarnier in 1874 gave to the world his traction forceps that we had a rational method of delivery from high position of the foetus. With the Tarnier forceps the accoucheur has everything needed in either high or low positions.

As to the abuse of "Forceps" I know of only two conditions in which they can be abused. First in the hands of those not qualified to use them and second to economize time by the physician.

References: Williams, Casseaux, Miller, Biddell.

Pleuritic Effusions in the Negro.

By W. R. Bishop, B. S., M. D.,

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Pleurisy is an inflammation of the serous membrane covering the lungs and reflected over the parietal walls of the thoracic cavity called the pleura. It is practically always the result of an infection by some pathogenic micro-organism.

There are four forms, the dry or fibrinous, sero-fibrinous, purulent and tubercular. It may be of carcinomatous origin.

The micro-organisms generally found associated are vis-pneumococus, tubercle-bacillus and pyogenic cases from staphlococcus, or streptococcus.

The relative frequency with which acute pleurisy is produced by each specific micro-organism is unknown since recovery takes place in mild cases and no opportunity of determining the provoking cause presents itself. The pneumococus is, however, the cause in the majority of cases. This statement is made by Hare, but he does not say whether this would

or would not include the negro. Statistics show however that in bacteriological examinations of a number of cases, including different races and children, the pneumococcus was found in about 30 per cent. streptococcus in 16 per cent. and the tubercle bacillus in 10 per cent., the pneumococcus running ahead of the streptococcus only in a series of cases where children were included.

It would be interesting to know what percentage the tubercle would show in a series of cases in the negro, a fact which could only be determined by the study of a large number of cases in some large southern hospital. Even then it would be difficult to determine with any degree of accuracy as all other micro-organisms are more easily found in a pleuritic effusion than the tubercle bacillus as it is an established fact that an apparently sterile effusion with a high specific gravity (1012 to 1024) always raises a suspicion of tubercle bacilli. It is a well known fact that certain races are more susceptible to certain diseases than others; also we can go a step further and say that a particular disease has uniformly a higher mortality in one race than in another. The point to which I desire to call attention is this—that pleurisy in the negro has almost invariably as its causative factor the tubercular bacilli, or the diseased area no matter how skilfully treated, soon becomes infected with this bacillus.

It has been my experience in twelve years' practice, no matter how early I recognized this condition in this race and applied the conceded proper treatment, both surgical and medical, that I either lost the case in a few weeks or months, or there was a decided improvement lasting several months which was, however, only temporary, the patient growing worse again and dying within ten or twelve months from the primary onset. On the other hand it has been my experience that no matter how late and neglected a case in the white race came to my notice and the proper treatment was applied I got uniformly happy results. To explain more clearly: I have had cases in the negro where the effusion was only sero-sanguinous and only required two or three aspirations to remove the fluid and all the symptoms. This condition was invariably followed by empyema, pulmonary tuberculosis and death.

Again, in the white race I have seen patients with empyema of long standing following lagrippe or pneumonia with all the symptoms of extreme emaciation, who upon evacuation of the pus and appropriate medical treatment, went on to a rapid and permanent recovery. One case I have in mind, a white boy sixteen years of age. He was in poor circumstances and some distance in the country. When I saw him first he had la grippe; I left medicine and directions to let me hear of his condition again which they did in about six or eight weeks. I then saw him again and found him in the extremes of emaciation with pus exuding from eight or ten openings in right side and a history of pneumonia following the attack of la grippe during the time between my two visits. He had had practically no attention. I resected about two inches of two ribs evacuating a quart or more of pus (a smear showing abundance of pneumococci). The cavity was flushed daily with sterile water containing Darby's fluid and the patient put on iodides, a general tonic and a nutritious diet: recovery was rapid and permanent.

A negro man aged 22 years had cough, embarrassed respiration, pain, fever and all the symptoms of pleuritic effusion. Previous history and family history was good. With Portains aspirator I removed a quart or more of sero-sanguinous fluid and put patient on iodides, general tonics and nutritious food. In a week or ten days I aspirated again drawing off about a pint of fluid. The patient then made an apparent recovery and was in good health for six or eight months when he was taken with a cough and died in several weeks with pulmonary tuberculosis. I have had similar cases to this in the negro all of whom died within twelve months. I have had identical cases in the white race who all went on to an uneventful recovery under the same treatment. I am in want of statistics along this line, I however have received replies from some southern surgeons and hospitals to whom I wrote, but all of them say they have never given this subject this line of thought and consequently never kept any records as to statistics. Some of these men however agree with me in the opinion that a pleuritic effusion in the negro is tubercular in 90 per cent or more of all cases or soon will be thus infected.

139 North St., East.

Intubation.*

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About twenty years ago I began doing intubation in diphtheritic croup. A few years later I read a paper at a meeting of the State Medical Association in Huntsville, in which I reported seven cases, with one success, and while that was not very brilliant, it was a beginning. I had faith in the operation as a means of saving life, although at the time of beginning it I had had no instructions in intubation and no assistance. The following year I reported fifteen cases, I think, fifteen or eighteen cases with three successes. About fifteen or sixteen per cent.

I read before the County Medical Society a few years later a report of probably fifty cases, with about twenty-five per cent. of recoveries. About that time anti-toxin came into use, and results began to be better. The first operation of intubation in the State of Alabama, and perhaps the first in the South, was done by Dr. Tipton of Selma, and I think I did the second operation a short while afterwards. For quite a while I had only a few cases, a case occasionally, but later we began to have a good deal of diphtheria, so that up to the time of the demonstration of anti-toxin as a means of curing the disease, I had done perhaps fifty operations, with about between twenty-five and twenty-six per cent. of recoveries.

I had all sorts of experiences whenever I had an intubation case on hand. I would lie awake at nights waiting for trouble, expecting to be called on account of stopped up tube or something else. There was always some complication, and the consequence was they gave me quite a little trouble and anxiety. The introduction, however, of anti-toxin was a great relief. Up to that time I could figure on losing about three cases out of four.

Since that time I perhaps have done possibly a hundred operations. A few of which have been without anti-toxin, but in the cases in which anti-toxin has been used, the percentage of recoveries has been

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*Stenographic report of address before Jefferson County Medical Society.

about 90, so that the operation of intubation has been one of the most powerful aids in the demonstration of the efficacy of anti-toxin.

Now, this experience of mine is quite a small one, as compared with that of some operators in the larger cities, but it is only in keeping with the results obtained by them. That, since the introduction of anti-toxin the percentage of recoveries has gone from 25 up to anywhere between 80 and 95 per cent., some reporting as much as 95 per cent. of recoveries out of a series of 100 cases, so that diphtheria is not regarded as the very serious matter that it once was. Another thing, it has demonstrated the fact that in nearly all cases of membranous laryngitis, whether diphtheria or not, we get good results from anti-toxin.

The question of the duality of disease has been thrashed over pretty well before and after the introduction of anti-toxin. There are some who think that practically all cases are diphtheritic. Still, however, there is a good percentage of the best men in the country who yet hold to the theory that there are some cases of membranous laryngitis and rhinitis which are not diphtheritic, and I think I have seen a few cases of that kind myself. I think I have said enough as to the advisability of the operation. Results are so satisfactory all over the country that the operation has been regarded as the correct thing to do. For quite a while it was contested. There were a great many men who insisted that it was a mistake, that tracheotomy was the proper thing, but I think it is very generally conceded now that intubation is the preferable operation, and I am sure that you more readily gain the consent of parents to do intubation than tracheotomy. It is more quickly done and without so much preparation. I have never done but few tracheotomies in diphtheria, and those few have usually been done rapidly where the child had stopped breathing suddenly and where it was necessary to do something at once, and where I felt that the effort to pass a tube in through the mouth would perhaps prove fatal. In these cases the knife must be plunged boldly into the trachea as you would do in opening an abscess.

In some cases I have struck a blood vessel, and had a hemorrhage

that filled up the trachea, and respiration was not established. In others I have been able to start up respiration, and the children have recovered temporarily.

The risks in the operation are the things that have to be considered, in fact, every man, before undertaking an intubation, ought to consider well the difficulties that he is likely to encounter, and the best method of overcoming those difficulties. The first difficulty, and a serious one, is the one mentioned before, that in which respiration has become so impeded, that any effort to introduce a tube, would perhaps stop respiration entirely, and the child be dead, unless your operation be done very quickly and deftly. The next difficulty is the one in which you have a large quantity of broken down membrane or in which the membrane has extended down into the trachea, and in your efforts to introduce your tube you may dislodge portions of the membrane and shove them down in front of the tube, forming an obstruction to respiration and after you have introduced your tube you may not have respiration established. So that it is necessary to be careful about shoving your tube down and watch the effect, and if respiration is not promptly established the tube should be removed at once. In this way you very frequently bring up your membrane and the child is relieved, or at least temporarily so. Then you can afford to rest a while and wait for the child to recuperate. I have seen one or two cases in which death has resulted from shoving down the membrane in front of the tube, and where respiration never became established again. There is still another difficulty in intubation that should be considered, and quite a serious one. Where the vitality of the child is at such a low ebb, and the heart's action is so much weakened with the struggle that the child makes in resisting the operation, that you get sudden stoppage of the heart's action. I have in one or two instances introduced my tube without lifting the child up where the condition was so critical that I felt afraid the effort would prove fatal. I saw an instance of that kind a few years ago in a prominent family of Birmingham where the child was practically dead, respiration was still going on, but the heart's action was extremely weak and the child perfectly limp and un-

conscious, and when lifted up by one of the physicians and attendants respiration stopped, the heart's action stopped and the child was dead. The tube was introduced, but it did no good. Still I have seen cases where I had expected results of that kind, where the condition was so critical that I have even advised the parents that there was a very strong probability that when I undertook to introduce the tube that the child would die; that the effort of lifting the child and the little resistance it could offer would perhaps stop the heart's action, and where successful results were obtained.

Now, there are a good many other things that might be said along this line, but it is late and I won't detain you.

There are a few points about the method of introducing the tube that might be mentioned here, if you feel interested in it, and Dr. Goldman of New Orleans has kindly offered to present some slides that show the position of the child and the tube and its introduction. This shows the position of the child as held by two assistants; the one assistant takes the child in his lap, sitting in a straight chair, with the back of child to the assistant, with the feet caught between the legs of the assistant, and the arms held down in the position you see there. The second assistant standing behind holds the head steadily against the shoulder of the first assistant, with one hand on each side of the child's head. The gag is introduced usually on the left side and held in place by left hand of the assistant. The child should be in perfectly erect position with the neck straight, with the chest not thrown out, nor the head back.

The next thing is the holding of the gag. Unless the gag is properly held and the assistant holding understands the situation, it may slip, the mouth close and the operation a failure for that time. With left forefinger as a guide the epiglottis is found and held back, the tube passed easily into the larynx—being directed first to the front passing behind the epiglottis into the upper portion of the larynx. When it is turned down pressing gently against the vocal cords until they separate, allowing the tube to slip through.

Recent Advancement in Our Knowledge of Diseases of Metabolism and Nutrition.*

By James S. McLester, A. B., M. D.
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Time was when it seemed that bacteriology would solve all the problems of medicine. Again cellular pathology occupied the attention of our most enthusiastic students and promised to be the key to all of our difficulties.

Emerging from a very much neglected position physiological chemistry is now studied by a number of the most brilliant investigators in our profession and offers by far the most fruitful and attractive field for medical research. It promises much, and I am sure most of what is now lacking in our knowledge of inner medicine will be explained by physiological chemistry. With great strides in the advancement of this science comes a more complete understanding of metabolic processes and of the so-called metabolic diseases. And it is with such diseases, I believe, that the practitioner of the future will be called upon to deal.

Hygiene and sanitation have greatly lessened the incidence of infectious diseases and experience has taught us to very skillfully handle them; so that I feel safe in predicting that in the future the specific infections will play a minor role, while the stress of our present day existence and our altered manner of living will give to metabolic diseases the leading part.

The more we learn of metabolism, the less often is the term "vital action" brought forward to explain some phenomenon of tissue or organ. The changes which occur in the body are chemical ones, and may all, I am forced to believe be explained by chemical laws. While the subject of this paper does not include pure physiological chemistry, this science is so thoroughly responsible for all additions to our knowledge of diseases of metabolism that I take the privilege of saying something about certain work which is being done. Dr. Barker, one of the most brilliant and enthusiastic workers in this country, gives a splendid ac-

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*Read before the Medical Library Association of Birmingham, Ala.

count in a recent number of the British Medical Journal of our present day knowledge of the albumens. In making the albumens Nature did her best and produced the highest and most complex of chemical compounds, so that their study becomes the most fascinating.

Analysis of the albumens is fairly complete and it is their synthetical study which occupies the attention of the most brilliant physiological chemist of today, Emil Fisher, and his pupils. In his excellent laboratory in Berlin he has in recent years accomplished wonders, and it is chiefly of his work that I shall speak.

Hydrolysis splits proteids into less highly organized compounds, and finally into certain relatively simple nitrogenous bodies, the amino acids. Practically the various albumens are merely complex chains of these acids, united in a great variety of manners. Emil Fisher has been able after synthetically producing amino acids to unite them into compounds chemically identical with certain of the simpler proteids, which respond to the biuret and other reactions for albumen. Plainly, he has in his laboratory manufactured the most complex of compounds, an albumen, a wonderful accomplishment indeed. Yet I had best quote here Dr. Barker's remark at a recent meeting of the Association of American Physicians. He reminded us in this connection that it is still a long jump from the making of albumen to the making of life.

The possibilities of varied combinations among the different amino acids is enormous, and as a result we see an infinite number of albumens. Recent research leads us to believe that not only does the same albumen differ slightly in different species, but that the same albumen varies even in different individuals of the same species—that serum albumen of one man differs to a certain extent chemically from serum albumen of another man. Thus we see why our proteid food must be digested. Every proteid molecule to be used as food must first be split in stomach and intestines into its component amino acids, which in turn are built up in the intestinal wall or liver into the albumens of the serum. And here is, to the practitioner of Inner Medicine, the most interesting stage of proteid metabolism. After the albumen of the food has been reduced by digestion to the simple amino acids, which in

turn are again united to form the albumens found in circulation, still another digestion, so to speak, must take place. Each variety of cell contains albumens peculiar to itself and differing from the proteids brought to it in the blood serum. Recent investigation indicates, as Dr. Barker points out that the cell again digests the proteid brought to it, breaking it up a second time into amino acids and remoulding the acids, so to speak, into its own peculiar albumen. In so doing the cell uses those amino acids which it needs, and casts off those not needed to be dealt with in the circulation. Those unused compounds are rapidly broken up and oxidized, the nitrogen being excreted as urea. Where this oxidation of unused amino acids does not properly take place, or where the individual cannot deal with certain of the intermediate compounds grave metabolism disorder ensues, and such is probably the origin of most small and great disorders of metabolism.

Next in far-reaching importance, I think, to this study of albumen metabolism is the work of Prof. R. H. Chittenden of Yale University, upon man's food requirements. For years physiologists have acted upon the assumption that the kind and amount of food required by a man is best indicated in the diet which the average healthy individual instinctively chooses. That left alone the race will select the food which suits it best. So the diet tables of all works on physiology are the result of observations of what food is naturally selected by the individual. Prof. Chittenden has conducted very carefully a series of experiments upon individuals of practically every walk of life, and his results indicate that all former diet tables prescribe an amount of food not only in excess of our needs, but which is actually harmful. The old table of Voit which most books copy, prescribe for a man weighing 65-70 kilo 118 gm. of proteid daily and sufficient of carbo-hydrates and fats to give a calorific value of about 3000—3500. All of the individuals in Prof. Chittenden's experiments gained in bodily strength and ability to endure fatigue upon a much smaller amount of proteid, usually about 55 grs. per day without any increase in the carbo-hydrates and fats. A number of college athletes living for more than six months on a 55 grs. of proteid and sufficient of the other elements to give about 2500 calories

daily gained markedly in physical strength and endurance and general well being.

Prof. Chittenden's experiments would indicate, as he thinks, that we habitually over-eat. A good many papers upon diet have appeared in the last year. There is a growing tendency to give closer attention to the exact quality and nature of the patient's food; in fact, such close attention is essential in the treatment of metabolic and nutritional disorders.

The U. S. Department of Agriculture issues a bulletin on the chemical composition of American food stuffs, which is a most convenient as well as authoritative source for such information and which may be purchased for the sum of five cents.

The chemical composition of the more common articles of diet is easily remembered, and knowing that 1 gm. of proteid yields 9 calories and that 1 gm. of carbo-hydrates or fat each gives 4 calories, the calorific value of a given diet can be estimated with a reasonable degree of accuracy. At Carlsbad the physicians and hotel keepers have arranged an excellent plan for conveniently controlling the patient's diet. The various dishes upon the menu are classified, all the members of a certain class being indicated in a given manner, and the physician merely prescribes for his patient foods of a certain class or classes.

Regarding digestion, the most important contributions to our knowledge of its physiology have come from Prof. J. P. Powlow. His monograph upon the work of the Digestive Glands details the results of his very original, brilliant and painstaking researches. The work was first made possible by the devising of what is now known as the Powlow fistula. Former studies of the chemistry of digestion made upon gastric contents obtained through an ordinary fistula were obscured by the admixture with the secretions of food in all stages of digestion. Prof. Powlow isolated a portion of the stomach, preserving the mucous membrane and nerves intact, which opens externally through a fistula, but does not communicate at all with the cavity of the stomach. From such a pouch is obtained the pure gastric juice unmixed with any-

thing. Next upon certain of the animals possessing the Powlow pouch was made a fistulous opening into the esophagus so that the food eaten by them immediately dropped back again through the fistula and did not enter the stomach at all. In animals so provided the nervous mechanism of secretion could be very accurately studied.

Most interesting among his discoveries is the wonderful regularity of variation with which secretion takes place. Practically constant curves can be traced of the total amount of juice secreted, of the Hcl., or of the digestive power of the juice. Each different article of diet gives a secretion different in amount and digestive power from that given by other articles of diet, but showing a practically constant curve as to quantity, acid content, or digestive power for that same food. In fact the course of the secretion under the same conditions is an absolutely constant one.

The glands do not pour out juice at a constant rate during digestion, but according to definite laws; so that for a given amount of a certain food the amount of juice collected every hour will show a variation which is constant and wonderfully precise. The juice is different for each article of diet, yet this difference is an absolutely constant one, showing in each instance a practically unvarying curve as to total amount or digestive power.

Also his researches demonstrate the complete nervous control of digestion. Animals with the esophagal fistula are fed meat which because of the fistula never reaches the stomach, and yet a normal copious flow of gastric juice is secured. On the other hand meat is introduced into the stomach of such an animal without his seeking it, or knowing what is being done, and no secretion follows. This shows how completely the feeling of hunger and sense of taste regulate secretion; and suggests what an important feature appetite is in digestion.

The treatment of obesity has received unceasing attention. All treatments consist merely in careful regulation of the patient's hygiene particularly as to diet. The patients are classified, as indicated by Crofton in a recent issue of the Journal, and given diets varying according to their age, the extent of obesity, and the existence of complications. The

calorific value of each diet is accurately estimated and diets varying from 1200 to 1500 calories prescribed.

Von Noorden has written a monograph on the indication for reduction cases. He points out that such cures expeditiously carried out in properly selected cases, contrary to popular belief, are not weakening, but really improve the general tone and physical strength of the patient. He considers the physician and not the patient the proper one to determine as to whether a reduction cure is advisable, and ridicules the idea of laying down a fixed set of rules, as is often done, and treating all patients with one unvarying method.

Von Noorden considers as suitable for obesity cures all cases of advanced obesity provided the condition has not been a life long one, and provided senescence has not begun. Here considerable skill in diagnosis is required; for while one person may not be senile until after sixty, another may be considered so at forty-five. In such senile cases suffering from obesity treatment should be directed mainly against any further progress of the disorder. Middle aged or youthful individuals with a moderate degree of obesity, that is 30 to 50 pounds above normal, are not suitable for reduction cures, the attempt here being merely to provide such properly selected diets as will prevent any further exaggeration of the condition.

In obesity complicated with heart disease reduction cures are emphatically indicated, provided sensescence, or rupture of compensation has not begun; in either of which latter conditions intermittent mild reduction cures may be instituted. To Oertel belongs the credit of first insisting upon the treatment of obesity in all circulatory disorders. This author in fact believed the treatment of these two classes of disorders to be inseparably connected. The great importance of the reduction of obesity when complicated by chronic bronchitis or by kidney diseases is insisted upon by Von Noorden, and he incidentally points out the injustice done patients suffering from either of these two disorders when they are put upon a diet which increases the body weight above normal; and he raises a voice of warning against carrying the fattening treatment of phthisis too far.

The cause of emaciation has obtained some attention. The etiologic factors variously assigned are low grade starvation, arterio-sclerosis, worry, loss of sleep and over work, the last three probably acting in unison. The treatment is obvious.

The nature and treatment of gout is being discussed with increasing interest. Authors class the purin bodies excreted accordingly as they originate from the proteid of ingested food or from that of the catabolized cell body as ex-ogenous and endogenous purins. By administering a purin free diet the exogenous purins can be reduced to a minimum. Van Noorden and Schief in the Berliner Klinische Wochenschrift describe their method of the gouty patient's purin tolerance just as we determine the carbohydrate tolerance of diabetes.

P. Roethlisberger writing in "Boos Archives fur Verdauung's Krumphuteus," considers the gouty or uric acid diathesis and acute articular gout as two quite distinct diseases, the former being a permanent metabolic disorder, and the joint affection the result of an infection and probably in no way differing from acute articular rheumatism.

Richartz of Hamburg reports two interesting cases of visceral gout. One, because of the absence of knee jerk, had been diagnosed tabes by Charcot, the abdominal pain being ascribed to gastric crises.

Both cases responded readily to a diet a minimum of purin derivatives. This author expresses the opinion that too seldom do we think of a disturbance of proteid metabolism in doubtful disorders.

Van Loghem of Amsterdam in his experiments upon rabbits noted that the administration by mouth of hydrochloric acid would prevent the experimental precipitation of uric acid salts in the tissues. From further experiments he obtained the valuable information that the administration of alkalies to dogs and rabbits would aid and increase the precipitation of urates.

Within the last few months has appeared a work upon the nature and treatment of gout by Ebstein of Gottengen. Prof. Ebstein, who has just recently retired in his sixtieth year, has been the father, we might say, of our knowledge of gout, having been a student of this disease for many years, and his book (which unfortunately I have not yet had an

opportunity of reading) is, I am sure, a most valuable contribution to the subject.

Not much that is really new has appeared in the past year regarding nephritis. I have already exhausted the patience of this audience upon other occasions in speaking of Van Noorden's advocacy of the limitation of fluids both in acute and chronic nephritis. In my service at the Hillman Hospital we get each year a good many nephritics, but they are practically always sufferers from the chronic parenchymatous form, and I have not seen much come from the withdrawal of fluids. In a few cases of chronic interstitial nephritis which I have had considerable benefit has accrued to the heart from limiting the fluids ingested. Those cases usually drink large quantities of water, either upon their own volition, or upon the advice of their physician, and undoubtedly much increased work is thus thrown upon the heart, enough at times to turn the balance of the scale.

Frequent contributions to the literature are made upon the observations first announced by Widal and Joral that the oedema of nephritis is due to chloride retention. Most observers agree that oedema can be very materially reduced by giving a chloride free diet, such as milk, meat and salt free bread. And some authors go further in stating that even those cases of nephritis uncomplicated by oedema are frequently influenced by limiting the sodium chloride ingested.

The tendency every where is to depart from the old milk diet as insufficient and at times actually harmful and to give a more liberal diet including a certain amount of meats.

Regarding diabetes mellitus, it is proven that the glycosuria is due to an excess of grape sugar in the blood—a hyper-glycemia—and that the normal store houses of glycogen, the liver and muscles is extremely poor in this substance. The course of the hyper-glycemia and the poverty of the muscles and liver in glycogen is the obscure point.

To Frerichs and Lancerank belong the credit of years ago pointing out the fact that in diabetes mellitus the pancreas is particularly always diseased, and in recent years Opie located the islands of Longerhands as the seat of the trouble. Supposedly these islands of cells manufacture

an internal secretion which has to do with the formation or else the destruction of glycogen. Van Noorden points out that it is not the destruction of glycogen that is at fault, but its formation. He advances the opinion that though the cells are bathed in a sugar solution in diabetes, nevertheless they cannot make use of it, for the reason that this sugar must first undergo some sort of polymerization before being fit for use, and that it is the missing pancreatic ferment which under normal conditions converts the sugar into a form in which it can be utilized by the cells. We see in diabetes the anomalous condition of cells bathed in sugar and yet dying of sugar hunger. The changes found in the pancreas by Opie and others are not, however, found by all investigators and occasionally we hear dissenting views regarding the pathology of this disease. Von Houseman and Herxheim found the parenchyma of the pancreas diseased more often than the islands.

Traumatism as an etiologic factor in diabetes has only an occasional adherent, the general belief being that diabetes really existed previous to the trauma. I have had one very suggestive case. A hebrew boy immigrant was in perfect health up to the time he received a heavy blow upon the back of neck. He became sick soon afterwards, and was seen to have diabetes mellitus. His decline was very rapid, and he died a few months later of coma.

In the treatment of the disease nothing new has been offered. Von Noorden thinks the disease can be actually cured in the early stages by administering a carbohydrate diet within the patient's tolerance and gradually enlarging the diet as his tolerance improves. He speaks favorably of opium, of salicylic acid preparations and of jambul in the order named.

Bacteriology of Diphtheria.*

By Robert Nelson, M. D.
Birmingham, Ala.

In discussing the subject of the bacteriology of diphtheria, I wish to say that I have only a few notes and will give you a very brief resume

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*Read before the Jefferson County Medical Society.

of the discovery and history of the organism. I shall take it up under the heads of the history, biology and morphology, vitality and pathogenesis.

The organism was noticed to be constantly present in the pseudo-membrane taken from the throats of patients suffering from diphtheria by Klebs in 1883. And in the following year, Loeffler succeeded in isolating the same organism in pure culture, and it goes by the name of the Klebs-Loeffler bacillus. Abbott cites the accidental occurrence of the disease in one of his assistants, who unintentionally sucked up a few drops of a virulent culture of the diphtheria bacillus through a defective pipette, thus fulfilling all the requirements of Koch's three laws as to the specificity of a germ, the other two having been fulfilled by Klebs and Loeffler.

Biology and Morphology of the organism.—It is a rather thick rod about the length of the tubercle bacillus that is from 2 1-2 to 3 micron in length, and from .5 to .8, of a micron in diameter. Its shape varies greatly. It may be straight or slightly curved. They may be of a uniform size or irregular, dumb-bell shaped or bulging in the middle. They show a slight tendency to occur parallel to each other. It is a non-motile organism, non-spore-forming, stains easily with anilin dyes, but best with Loeffler's alkaline methylene blue. In the small or more regular forms of the organism, polar bodies are commonly seen. These are known as the Babes-Ernst bodies. They have a diameter greater than that of the bacillus itself and are more apparent in organisms that have been cultivated artificially. Neisser's stain brings out the polar bodies very well, and also affords us a good means of differentiating the pseudo-bacillus from the true. The technique of Neisser's stain can be found in any text-book.

The optimum temperature of the organism is the body temperature or 37 degrees. C., that is the temperature at which it grows best. It is a facultative anaerobe. The culture medium on which it grows best is blood serum. On this culture medium the colonies of the diphtheria bacillus appear long before those of any other organism. The colonies can be seen clearly in about nine hours after inoculation of the blood

serum. They are pearly-gray or yellowish-gray, slightly raised dots and later on in their growth become confluent.

On agar-agar they grow more slowly than on blood serum, the colonies are larger, and darker in the center than in the periphery. They are not unlike the staphylococcus on this culture medium.

In gelatin stab cultures little whitish colonies appear along the lines of the stab. Gelatin is not liquified.

Bouillon is clouded. Later the growth accumulates around the bottom and sides of the tube and leaves the bouillon clear.

On alkalin potato, a delicate coating is formed on the surface. Milk is unchanged by the growth of the organism. When grown in litmus milk, the milk is first turned slightly red and then blue again. Organism grows well both on raw and boiled eggs.

Vitality.—A very important characteristic of the diphtheria bacillus is that it resists heat and chemicals very feebly. In ten minutes at 58 degrees C. it is killed, also in 20 sec. by a 1:1000 solution of bichloride, and as quickly by a 50 per cent. solution of potassium permanganate, 5 per cent. carbolic acid, 3 per cent. carbolic acid in 30 per cent. alcohol, and 4 per cent. creosol in 40 per cent. alcohol. It cannot withstand drying very long. Cold has little or no effect.

Pathogenesis.—A very interesting feature about the diphtheria bacillus is that man as well as animals, especially cats, chickens and pigeons, are susceptible. Animals are frequent sources of infection. The horse is the anmial used in the manufacture of probably the greatest boon to humanity, the diphtheria antitoxin, and as we have with us tonight Dr. Coleman of New Orleans, who is to give us an exhaustive paper on antitoxine, I shall not consume any more of your time in the discussion of my part of the subject.

Selected Articles.

THE CERVIX UTERI BEFORE, DURING AND AFTER LABOR.

A. Ernest Gallant, M. D.

New York.

For our purpose this evening we may consider the Cervix Uteri in connection with those conditions which—

1. Prevent Conception. 2. Interrupt Gestation. 3. Retard Labor, and 4. Delay Convalescence.

As a connecting link in the sexual chain for the "trysting" of the spermatozoa and ovule, the cervical canal is of primary importance; and any condition which impairs this function is worthy of careful consideration. In this connection we most commonly meet with cervical deformity or flexion, of two varieties: (a) a bending forward of the cervix—anteflexion of the cervix, and (b) a bending backward of the body of the uterus—retroflexion of the body, both causing obstruction at the internal os, preventing the entrance of spermatozoa into the uterus, as well as the escape of menstrual blood from the uterine cavity. These flexions we overcome by dilatation, curettage, and the introduction of the author's bivalve uterine drain, to be left in place from three to six months. When removed, the cervical canal will have adapted itself to the shape of the rigid drain and thereafter maintain its normal shape and patency.

When the cervix approaches the vulva and the fundus lies in the sacral hollow (retroversion) the penis slips behind the cervix, ejaculation takes place into the posterior fornix, the semen escapes, and the spermatozoa cannot find the os externum or conception take place.

Where the fundus is non-adherent and can be replaced and the uterus held forward by a pessary, impregnation will shortly follow; as in Case I. Mrs. E. C., who applied to me April 19, 1896. Married 9 months, never pregnant. Uterus retroverted. Uterus curetted, lifted up, and supported by a pessary. A boy was born April 27, 1897. From this

time on she wore a pessary, except when well advanced in pregnancy. After the fourth child was born she wanted to know how she could put a stop to having more children?

In some instances where the uterus is held down by uterosacral, fibrous bands, while under anæthesia, we can stretch and elongate the bands sufficiently to lift up that organ, curette, drain and support it by a pessary, inserted with the broad end under the symphysis. (Practical Points on Pessaries, Phili. Med. Journ., May, 1903.) As in Case II, Mrs. K. M., who, on Oct. 28, 1903, came for advice on account of lack of sexual feeling and sterility. Oct. 31, curettage, drain and pessary inserted; and her husband who ejaculated prematurely, was advised to continue connection until his wife completed the act. This combination resulted in the birth of a child, July 20, 1905, and a second addition to the family in 1906.

It would be well, in every case of sterility (?) in the woman, if operations were postponed until a careful examination of the semen of her husband has been made.

In syphilitic women all our usual methods fail unless we recognize the disease and in addition to the measure already described we give appropriate treatment, as illustrated by Case III. Mrs. M. H., formerly a nurse, who applied for treatment Dec. 8, 1899, complaining of backache, almost continuous flow, with severe dysmenorrhœa, for past two years. Has lost 20 pounds in the past year. The uterus was enlarged, of a spongy consistency, and low down cervix near vulva, and from its "feel," syphilis was suspected, but no history obtained. Her husband was free from disease. Dec. 10, curettage, and gauze packing, removed next day and a pessary introduced. She rapidly improved under antileuetic treatment and gave birth to a boy, Dec. 30, 1900; a girl, March 16, 1902; a boy, Feb. 2, 1905; and another boy, June 17, 1906. In spite of potass iodi and mercury during each pregnancy, the first three, robust when born, soon gave evidence of hereditary syphilis, but the first two responded to treatment and are strong children today. The third died in a wretched condition June 12, 1904, at 4 1-2 months. Since the last child was born the mother has continued mixed treatment, and the child has done only fairly well.

2. When interrupting gestation the cervix plays no inconsiderable part, as illustrated by Case IV. Mrs. B. B., June 30, 1896, aet. 23, complained of pain in back and abdomen, nervousness, vaginal discharge, frequent urination, painful, constipated stools, poor appetite, and supra-orbital headache. Has had 4 miscarriages, at about the third month. Does not desire children. The cervix lay near the vulva, fundus on the pelvic floor. Diagnosis: Retroversion; old gonorrhœal vaginitis and urethritis, also involving the vesicle trigone. The uterus was replaced and supported by an Albert Smith pessary, upside-down, silver nitrate to the urethra and vagina with ichthyol tampons. She induced abortion once or twice a year up to Jan., 1901, when she decided to have a baby. A pessary was worn until June, and she was delivered by forceps of a deeply cyanosed girl on Nov. 25th, 1901. During the puerperium she was massaged daily; caused to lie upon her side or abdomen, not upon the back; the vagina was tamponed daily with sterile gauze after the fifth day. She was out of bed the tenth day; at the end of two weeks a pessary was introduced and worn until May 11; a special corset put on and the pessary re-introduced. July 1. Pregnant; and in due season she was delivered of a healthy child—by another physician.

Case V. An unmarried woman of 30 years, came to the Roosevelt Hospital O. P. D., March 22, 1900, with a sore on her privates, edema of the labia and ammenorrhœa, with nausea. Menstruated Feb. 12, 4—5 days. Examination showed chancroid Bartholinitis and œdema of the labia; pregnant 3 months. April 19th, face, hand and ankles very much swollen; much albumen in urine. On that date she informed me that on a previous occasion she went into a hospital and had a miscarriage brought on because of inflammation of the kidneys. April 24, in consultation with Dr. F. D. Merchant, the cervix was dilated and vagina packed with sterile gauze to the vulva. April 27, the hard cervix was instrumentally dilated, a four months' fœtus with membranes extracted; and the cavity packed with gauze. The fœtal sac lay in the right horn. The anasarca rapidly disappeared. The urine, which formerly contained 18 per cent. albumen slowly cleared up.

In the presence of Eclampsia the cervix frequently offers the most

serious obstacle to rapid delivery as in Case VI. Mrs. P., a patient of Dr. P. J. Genthner. Last menstruation, Jan. 27, 1900, for 3 days. First seen by the writer Oct. 19. Since Oct. 15 the urine has been one-third solid with albumen which has not diminished under milk diet. Face and legs œdematous. The os externum admitted one finger; was further dilated by the fingers to two inches and a bougie inserted at 11.20 a. m., shortly followed by convulsions. At 11 p. m. the cervix was further dilated by the Harris method, and forceps applied at 11.30 p. m. the cervix being forced upward over the forceps, with very strong traction, and a "still" child delivered, it having inhaled in the vagina and passed meconium in utero. The placenta was delivered by Crede's method, and was followed by a convulsion. The uterus contracted firmly. Veratrum Viride m v, hypodermically. Second convulsion, 2.30 a. m., Veratrum repeated with Morphine gr. 1-8. Third convulsion, 4.30 a. m., hot, wet pack. 8 a. m. Hot water and Epsom salts, dr. 1-2 q. 15 m. for ten doses. Slow convalescence.

It was not until after having delivered the wife of a physician through a partially dilated, undilatable cervix, which was pushed upward over the blades of the forceps (Elliot's) and the delivery of an asphyxiated child, which had inhaled while in the vagina, emptied its bowel in the uterus, and breathed very fitfully under the most energetic measures for resuscitation, for four hours and then died; that the writer was lead to a close study of the action of the blades when used in this way, and to his astonishment and chagrin found that the apices of the blades of forceps provided with the loose or English lock would under these circumstances almost touch, and no amount of compression of the handles by the hands of the operator could prevent their doing so when the cervix was not fully dilated, or dilatable, or the vagina and vulva were narrow and rigid.

In order to overcome this dangerous and often fatal compression the writer has had a shoulder placed upon the left (female) blade of the forceps at the junction of the shank and blade which effectually prevents the blades from coming any closer together than they are originally designed to do. Of course, if the blades are made of too light or springy material and the cervix rigid the blades may spring together in spite of the shoulder.

Hemorrhage from the cervix, in pregnancy, may necessitate accouchment force, as in Case VII. Mrs. T. K., patient of Dr. J. R. Latham. On Oct. 22, 1901, she had been flowing for two weeks, requiring three napkins daily. Fundus at the umbilicus, contracting; cervix stellate laceration, dilating. Vagina packed; morphine, bromid, and chloral; with absolute quiet recommended. Oct. 31. In spite of bi-daily packing, the flow continued, labor pains began at 11 a. m. and continued. Manual dilatation of the cervix, breech presenting. Constant uterine contractions prevented podalic version. Membranes ruptured; index finger hooked in the groin and an easy extraction accomplished at 1.30 p. m. Child blue, but breathed spontaneously. The placenta and membranes were delivered complete; the former being attached by its margin to the internal os, explaining the source of the hemorrhage. The mother made an uneventful recovery.

Hyperemesis Gravida may necessitate the opening of the cervix for delivery of a dead child (Case VIII) which also illustrates the inadvisability of using ergot to empty the uterus. On Feb. 10, 1904, I called to see Mrs. M., and learned from her physician that for the past three months she had suffered from persistent emesis; with rapid loss of flesh and strength, to such an extent that ergot had been given to induce uterine contraction. Life had been felt up to two days ago. Yesterday the doctor dilated the cervix with his fingers, up to a dollar size. Feb. 10, the patient was extremely emaciated, skin hot and dry; the uterus very tense, elongated in its vertical axis; the lay of the foetus could not be made out. Through the vagina, the cervix was found open two inches; the head soft and pliable. Manual dilatation of the cervix, which tore laterally and posteriorly. Forceps were introduced, with the axis-traction handles, and after a long, hard pull, a dead, nearly full term child was delivered. The blood in the umbilical cord was clotted. The head was remarkably elongated. The mother did well and rapidly regained health and strength. We were unable to account for the emesis.

3. The cervix in full-term labor not infrequently retards delivery, from a cause of which we see no mention in medical literature, and yet

owing to the frequency with which it produces severe laceration of the cervix, we deem it of great import. We refer to Erosions or eversion of the cervix, always accompanied by a proliferation of connective tissue, the cause of the damage during labor. The cervix will be noticed to have dilated until only a thin, sharp, ring remains at the external os, the edge of which feels as if it were a piece of hard twine. Labor pains have no power to dilate this ring; usually the membranes are unruptured, and either the edge gives way under the force of uterine contractions or the accoucher stretches the os, which suddenly tears, very deeply into either lateral fornix, not infrequently into the broad ligament. I first noticed this occurrence while an interne at the Sloane Maternity Hospital. In practice laceration from this cause has been avoided by making several very shallow incisions through the cord-like ring, not more than 1-8 inch deep, with a long, blunt-pointed, dull-edged bistoury.

A thick, oedematous, anterior lip, in a recent or old lacerated cervix, frequently retards labor, as occurred in Case IX. Mrs. L. D., primipara; June 30, 1901, 11 p. m., os dollar size; bag pouting through, head freely movable above brim; pelvis roomy in proportion to head, which can be pushed down into inlet. Os stretched with fingers. Next morning, 6 a. m. Os no wider, no advance; membranes punctured. 10.45 a. m. Pains diminishing in strength and frequency; patient exhausted; Chloroform; McLean's forceps applied to the head above the brim, in R. O. L. Traction only seemed to increase extension. Forceps removed and re-applied in the left plane, with strong supra-pubic pressure, and pushing upward the anterior lip, and the head came easily down. Perineum lacerated 2d degree, silk-gut sutures. The boy breathed spontaneously. Cord ligated with Kellog's rings; dressed with the safety dressing. (Amer. Medico-Pharm. Jour., 1905, XIV, 858.)

The point of chief interest in this case, outside the obstruction from the thick anterior lip, was that the head was relatively too small in proportion to the pelvic inlet, that it simply wabbled above the brim and refused to flex and enter the pelvis. When properly grasped by the forceps, flexion occurred and it was very easily brought down into the pelvis. In my obstetric practice the failure of the head to properly flex has been the most common cause of delay, due to the fact that the

pelvis is proportionately too large for the occiput to fit snugly and advance in the natural way. Most of these cases can be remedied by pushing up the forehead and making supra-pubic pressure on the head or the buttocks, through the fundus uteri.

DELAY DUE TO DRY LABOR.

A large, thick, primiparous cervix, in a very short, stout, young woman, Case X. Mrs. R. T., offered considerable obstruction to labor and delivery, owing to premature rupture of the membranes. Dilatation was hastened on account of the cardiac distress caused by aortic stenosis, with insufficiency of the mitral valves. Last menstruation, Mar. 4, 1900. Dec. 13, 9.30 a. m., some liquor amnii escaped and shortly after pains began. 4.30 p. m., os dollar size, pains every 3 to 5 minutes. 9 p. m., manual dilitation attempted and the cervix opened to 3 inches; vagina very rigid; the largest Voorhees' bag introduced into the latter and expelled. Pains inefficient. Chloroform: 10.30 p. m. Forceps applied to the head which lay in the inlet, L. O. A. A bouncing boy delivered at 1.50 p. m. and breathed spontaneously. The right temple was cut by the forceps which also marked the left jaw and neck. The vaginal floor was lacerated by the forceps, the perineum externally being intact. Mother and child recovered nicely, and except for some cicatrical contraction of the vagina, was in good health for 3 years after and died of Bright's disease of cardiac origin and dissipation, Nov. 5, 1903.

Deep laceration of the cervix with fixed retroversion of the uterus and what this condition so often leads to is graphically shown in Case XI. Mrs. J. V., aet 30; married 7 years; mother of 4 children; the last born 16 months ago. Of late has been menstruating profusely every three weeks, and flowing for the past 12 days, off and on, her only complaint at this time. Examination shows an unusual varicose condition over the mons, and around the vestibule and clitoris; the cervix large, near the vulva, deeply lacerated bilaterally, everted, eroded, the fundus lying in the sacral hollow, only partially replacable. May 10, entered Roosevelt Hospital, was curetted, and the cervix and perineum repaired. March 30, 1901, reports that she has been well since the operation; flowing but 2 days each month. May 3, 1901, menstruated 10 days in

March, and since then every three weeks. Uterus on the pelvic floor, cannot be lifted up. May 7, 1901, at the Metropolitan Hospital, assisted by Drs. Joy, Bartholomew and Jennings, an attempt was made to curette the uterus, but owing to hypertrophy of the supravaginal portion the cervix could not be dilated enough to admit a curette. Through a median incision the thick parametric bands were stretched; while doing so the very marked engorgement of the veins (varicocele of the broad ligaments) was noted. A needle with catgut was passed through the broad ligament, and back again in such a way as to surround the round ligament at its middle and the needle then passed through the peritoneum and posterior sheath of the rectus, about one inch from the edge of the median incision and the ends tied together. This manœuvre was repeated on the opposite side, thus suspending the uterus from the abdominal wall by the round ligaments, where it could freely swing without interfering with the bladder or the uterus in subsequent pregnancy. The vagina was packed with gauze, for several days and a pessary worn until June 17, 1901. Dr. Frank Mathews, Chief of the Gynecologic department, examined her, and found the uterus in good position, and movable. On March 10, 1902, she was delivered of a girl weighing 7 1-2 pounds without other assistance than that of converting an L. O. P. to L. O. A. at the brim. The cervix remained high throughout pregnancy. During the puerperium she was instructed to lie upon her side or abdomen, not upon her back to prevent the uterus from retroverting and for some months after wore a pessary. March 1, 1904, the uterus was in good position; last memstruation, 6 days; weaned the baby 2 months. Oct. 1, 1904, last menstruation June 1st, 3 1-2 days. Now pregnant about 5 months and in good health. Was delivered by another physician, March, 1905. This history emphasizes the fact that the repair of deep laceration of the cervix and perineum will not, does not, and cannot cure menorrhagia, backache, etc., unless the retroverted, unreplacable uterus is restored to its normal bed, the bladder, and of all the various methods which have been devised for this purpose the one above described, which was learned from Dr. Jarman, has proven the most satisfactory in the considerable number of cases in which I have used it.

In this country Flattened pelvis is rarely met with, but always makes the divulsion of the cervix especially difficult. On Sept. 19, 1903, Dr. E. V. Hubbard asked the writer to see a primipara, Case XII, who was then three weeks over time. At 5 p. m., while endeavoring to introduce a bougie it had punctured the membranes and allowed the water to escape. Dr. Hubbard divulsed the cervix manually and as pains were inefficient, attempted to deliver with forceps. At 10 p. m. the head lay in the transverse, freely movable above the brim; fœtal heart's action good. Cervix dilated 3 inches, a firm, hard ring. The promontory could be easily reached. The Tucker-McLean forceps were applied and after considerable effort the head was delivered and rotated to the right; but the body could not be turned; and the arms were delivered one by one, followed by the body. The boy's head had suffered considerable compression; he was thoroughly cyanosed, but after half an hour of "pump-handle" resuscitation, and hot and cold water, he revived and bawled vigorously. No accurate measurement of the true conjugate was made but was estimated at 3 1-4 inches.

The immediate repair of deep cervical lacerations in the hands of those familiar with that sort of work, is equally beneficial as immediate repair of the perineum, as compared with subsequent operation, and when associated with postural training of the uterus to return to its normal position with the fundus resting upon the bladder, (The Puerpera, Am. Med., 1904, VII, 738), will prevent all the unpleasant train of symptoms which make the parous woman's life miserable and has done more to encourage "race suicide" than any other feminine disorder, excepting only, perhaps, the Neisserian coccus.

Whenever we are called upon to deal with a lacerated cervix, gapping, everted, and eroded, the indications are for curettage, repair of the laceration and drainage by the use of the bivalve drain. If, in addition the uterus is retroverted, and can be replaced, we insert a Smith, Hodge (broad end behind the symphysis) or hollow rubber pessary. Should the utero-sacral ligaments be thickened, or the uterus adherent posteriorly, and cannot be replaced when in the knee-chest posture, or under anæsthesia, then the organ must be freed through an abdominal wound and suspended after the manner described above.—Annals of Gynecology and Pediatrics.

Editorial.

W. H. BELL, M. D., Editor.

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Exophthalmic Goiter.

The thyroid gland is receiving a good deal of attention at the present day, and justly so as it is one of the organs of the body of which very little is known as to its physiology or pathology. Of course little can be definitely proven of its pathology until we know more of its physiology.

Basedowe, in his efforts to explain the causes of Grave's disease or exophthalmic goiter, attributed it to a dyscrasia of the blood very similar to that found in scrofulous conditions. He arrived at this conclusion from the enlarged lymph nodes usually found accompanying this

condition, and also from the fact that a very pronounced anemia often existed. Other observers proved this conclusion not well founded, as the same condition existed in full blooded individuals. Claud Bernard and many other observers arrived at the conclusion that this disease resulted from a neurosis of the cervical sympathetic. But, while this opinion was held by men whose observations were of much value, it was soon abandoned. Muller and some others observed that in cases dying from Grave's disease there was often found a degeneration of the spinal cord and medulla. But Ballet was the first to put forth the claim that this disease was due to this degeneration or pressure. He was able by a resection of different portions of the medulla to produce the three principal symptoms of Grave's disease, the gioter, tachycardia and exophthalmos. It seems that it was necessary for the section to be made just below the corpora quadrigemina, and while it was impossible to produce all three of these cardinal symptoms at the same time; it was quite easy to produce one of the three. But at autopsy it was found that the medulla was normal in the majority of cases, therefore this would not explain the condition. As it seemed that the disease was of nervous origin Maret, Charcot and others decided the best solution of the problem would be to lump the whole proposition and regard the disease as "an intrinsic neurosis involving all parts of this system."

In 1891 Morbius claimed it was not a neurosis, but a condition of disordered thyroid. This idea was further perfected by Greenfield who in 1903 claimed the disease to be due to "a chemical intoxication caused by an abnormal product of a disordered gland." This view is further borne out by the fact that over feeding with thyroid substance in those cases where the thyroid gland had been removed would produce a very pronounced picture of Grave's disease, with of course the exception of the enlarged gland. Then the question would present itself if we may not look also to the supra-renal bodies as taking part in this condition; for we know that the secretions from the two glands are antagonistic to each other, the one raising, the other lowering blood pressure. And it may be found that we could by resection of all or a portion of the supra-renals produce this disease.

Mayo recently called attention to the fact that the thyroid may play quite an active part in the production of the toxemia of pregnancy. For it is in those severe cases of true toxemia that we find no enlargement of the thyroid, and we find the blood pressure extremely high. The solution of some of the problems of the physiology and pathology of the thyroid gland will win renown for some investigator and we would be glad to see the wreath of victory won by some southern man.

As to treatment, Richardson says so far the serum and milk treatment cannot be recommended from the results obtained. Rogers and Beebe obtained a serum with which they treated ten cases with extremely satisfactory results. They took two goiters recently obtained from cases suffering from Grave's disease, ground them to a pulp, and after extraction with normal salt solution and treatment with acetic acid and ammonium sulphate they yielded a precipitate containing the neucleoproteids and the globulins, including thyreoglobulin or supposed active secretion of the thyroid gland. This precipitate was injected into rabbits and, after four or five weeks, the animals were bled to death from the carotid artery, and the serum obtained with which the cases were treated.

Thompson has also spoken most highly of the results obtained from the use of this serum. Good results following the use of an antithyroid serum are also reported by Kuh, Elsner and Wiseman.

Richardson sums up his opinion by saying that his experience has shown that strophanthus and digitalis in reasonable doses will control the cardiac symptoms, while dissected suprenal gland, blue mass, aristol, or lugol solution seem to have a marked effect upon the general condition.

Rhein says that the galvanic current should be applied in all cases. He says that the results are not always uniform, but in many cases the treatment is followed by a sense of relief.

Some surgeons report good results from the surgical treatment. As to the mortality from the operations, it has been reduced; but the ultimate results when the cases are followed up have been little improved. It would be an important point to decide before operation whether the condition is due to some other degeneration outside of the thyroid gland.

Cases are often seen in which the symptoms of Grave's disease are pronounced without enlargement of the thyroid. In these cases the interesting question would be to know if there were not a normal thyroid secretion thrown into the system producing symptoms because some gland possessing antogonistic serum was not doing its duty. The proven intimate connection existing between the thyroid and other glandular organs causing enlargement of this gland during coitus, pregnancy, etc., would incline the surgeon to think that the internal medicine man may claim the treatment of this condition.

No treatment, however, has as yet been brought forward that is entirely satisfactory.

Sparteine Sulphate in the Suppression of Urine.

Our attention has been called to the use of sparteine sulphate for suppression of urine, and while our experience is limited to one case, in which there was complete suppression for 24 hours, we feel that it possesses some advantages in this condition not possessed by others of this class. One of these properties is its quick action which is said to be within a half hour after hypodermatic administration. Another is the ease with which it is administered if the patient should be in a uremic coma.

Stuart McGuire, Surgeon to St. Luke's Hospital, Richmond, Va., commends this drug highly for the post-operative suppression following abdominal operations. He says, "During the past five years I have lost more patients from post-operative suppression of urine than from all other causes combined, despite the almost routine use of chloroform as an anesthetic. In treating this condition I tried water by mouth, skin and rectum; hot packs and vapor baths; cups and counter-irritants; strychnine, digitalis and nitro-glycerine; calomel, and in one case stripping the capsule of the kidney; with uniform bad results." For the past two years he has employed sparteine sulphate hypodermatically and found it acted beautifully in every case; and six cases, he feels quite confident, owe their lives to this remedy. He warns against the use of too small doses, believing results can not be expected

from 1-4 gr., as recommended by some text-books; but that it should be administered in 1 gr., or even 2 gr. doses. Pettey also says that the dose ordinarily recommended is entirely inadequate to produce definite results. He claims it to be an excellent non-irritating diuretic if given in from 1 to 2 gr. doses.

Sparteine is an alkaloid obtained from cytisus scoparius, or common broom plant. Its action is very similar to that of digitalis, only possessing greater diuretic properties, and is much quicker in action.

Ergot After Labor.

Twenty years ago it was almost the universal practice among obstetricians to administer a dose of ergot at the conclusion of the second stage of labor, to insure firm uterine contractions. In recent years this practice has not been so universal. Hare in 1905 claimed that as labor is a physiological process such artificial aids are unnecessary, and that the routine practice of administering ergot after labor is bad practice and gradually passing out of use.

During the past year, however, after questioning five prominent obstetricians on the subject the same author finds that it is the custom of four of the five to give ergot as a routine practice after labor. They claim that they have never seen any ill effects follow the use of ergot when administered at the proper stage. Hirst (one of the five questioned) says: "My reason for doing so is that having had in the early part of my experience some serious cases of post-partum hemorrhage from relaxation of the uterus, I feel that every precaution possible to prevent this accident ought to be taken in every case. I have never seen any disadvantage from the use of ergot."

We believe that the practice is not so universal as is indicated by the above report, and do not think it necessary to administer it in every case. Where previous experience justifies the apprehension of troublesome hemorrhage it should of course be used. But as a routine practice, especially where uterine contractions are firm and remain so, after normal labor we can not see the necessity for using it.

Support the Local Journals.

The local journal is the index of the local profession. If you only subscribe for the great metropolitan magazines you are lost in the crowd. Your local journal represents you, no matter whether you choose or not. If you contribute to its support, and supply to it your best material, you are elevating yourself in repute as well as your neighbor.—Ex.

We copy the above from a recent editorial in an exchange, as expressing our views. The support given this journal since the present editor assumed control in December has been very gratifying, indeed. And we take this opportunity of expressing our appreciation of this support. We recently had occasion to send statements to all the names appearing on our mailing list. We did this to revise our list as well as to secure funds due, which are necessary to the successful management of a journal. Many have responded and are still responding. We are grateful for these responses. We are still more grateful, however, for the many expressions of appreciation we have received for our efforts to improve the Journal. We expect to continue our efforts and exert our best energies to make it worthy the support of every doctor in Alabama. We ask the support of the entire profession of the State. We want, not only your financial support as subscribers; but we want your best articles, your best papers read before your county societies, reports from the societies, news items of professional interest, etc. And besides this, if you see anything in the Journal worthy of commendation, speak of it to your neighboring doctor who may not be a subscriber. Be a helper instead of a "Knocker." It is only very seldom that we receive a letter from a "Knocker," who is (in his mind) bigger than his local confreres, and says "I am getting so many weekly metropolitan journals that I cannot take the local journal." Support the local Journal and together we will make it creditable to the profession of our beloved State of Alabama.

The Question of State Law for the Registration of Nurses.

We notice that there is now pending before the Pennsylvania State Legislature a bill for the registration of nurses. It will be very unfortunate if this bill should pass. The experiences of New York and New Jersey prove that a State law for the "Registration of Nurses" is not only unnecessary, but harmful. Many hospital trained nurses are overbearing and dictatorial and require too much attention and waiting on, and to pass laws conferring special marks of distinction upon them will tend to accentuate these qualities. The nurses in asking for these laws are working against their own best interests, for if the laws are enacted it will only be a little while before doctors will refuse to employ such nurses and turn to those of loss pretentious but of greater usefulness.

The Southern Medical Association.

The officers and councillors of the Southern Medical Association met at the Hotel Hillman in this city on Feb. 22, 1907. There were present at the meeting Dr. H. H. Martin, of Savannah, Ga., President; Dr. Raymond Wallace, of Chattanooga, Tenn., Secretary; Dr. G. C. Savage, Councillor for Tenn.; Dr. M. Hoke, Councillor for Ga.; Dr. D. F. Talley, Councillor for Ala.; Dr. L. G. Woodson, Chairman of the Section on Ophthalmology; and Dr. J. S. McLester, Secretary of the Section on Medicine.

The purpose of the meeting was for perfecting plans for the coming meeting of the Association to be held in this city in October; discussing methods of bringing the Southern Medical Association before the various State societies; outlining a campaign for membership, etc.

This Association has the sympathy and support of the profession of the South. It will be a strictly scientific medical body, and hence its entire time may be devoted to scientific deliberations. Membership in any one of the State medical associations of Alabama, Georgia, Tennessee, Louisiana, Mississippi and Florida will entitle one to membership in this Association.

The President, Dr. H. H. Martin, and the Secretary, Dr. Raymond Wallace, were authorized to take the necessary steps to secure a charter from the House of Delegates of the American Medical Association.

Life Insurance Fees.

Below we give the names of the doctors in the counties that have been forwarded to us who have signed the resolutions not to make old line life insurance examinations for less than $5.00. Let others send in their names who have agreed to these resolutions, or who will agree to them.

Shelby County.—D. L. Wilkinson, M. D., Montevallo, Ala.; J. H. Gunn, M. D., Calera, Ala.; B. H. Smothers, M. D., Wilsonville, Ala.; O. E. Black, M. D., Wilsonville, Ala.; I. J. Bickley, M. D., Calera, Ala.; J. H. Williams, M. D., Columbiana, Ala.; W. C. Williams, M. D., Shelby, Ala.; J. I. Reid, M. D., Aldrich, Ala.; J. R. Morgan, M. D., Shelby Springs, Ala.; T. H. Payne, M. D., Saginaw, Ala.

Etowah County.—W. H. Acton, M. D.; Alabama City, Ala.; H. L. Appleton, M. D., Gadsden, Ala.; H. V. Baskin, M. D., Coats Bend, Ala.; D. H. Baker, M. D., Gadsden, Ala.; J. M. Brown, M. D., Gadsden, Ala.; W. S. Edwards, M. D., Gadsden, Ala.; E. T. Camp, M. D. Gadsden, Ala.; Chas. T. Acker, M. D., Gadsden, Ala.; G. L. Faucett, M. D., Gadsden, Ala.; C. L. Guice, M. D., Gadsden, Ala.; J. E. Leach, M. D., J. Gramlin, M. D., Rock Springs, Ala.; H. L. Ison, M. D., Gadsden, Ala.; E. S. Jones, M. D., Gadsden, Ala.; J. W. Lawrence, M. D., Turkey Town, Ala.; F. M. McConnell, M. D., Attalla, Ala.; C. L. Murphree, M. D., Gadsden, Ala.; A. W. Ralls, M. D., Gadsden, Ala.; M. P. Stephens, Attalla, Ala.; J. P. Stewart, M. D., Attalla, Ala.; I. C. Ballard, M. D., T. E. Callon, M. D.; R. A. Burns, M. D.; J. C. Slack, M. D., Gadsden, Ala.; J. H. Wood, M. D., Attalla, Ala.; G. W. Wilson, M. D., Attalla, Ala.; J. J. Patterson, M. D., Mountainboro, Ala.

Green County.—M. B. Cameron, M. D., Eutaw, Ala.; M. L. Malloy, M. D.; Eutaw, Ala.; A. P. Smith, M. D., Eutaw, Ala.; G. A. Moore, M. D., Futaw, Ala.; C. W. McDonald, M. D., Forkland, Ala.; H. B. Klie,

M. D., Forkland, Ala.; H. T. White, M. D., Clinton, Ala.; S. G. Hamilton, M. D., Knoxville, Ala.; Kemon Thetford, M. D.; Boligee, Ala.; L. L. Starkey, M. D., West Green, Ala.; S. P. Taylor, M. D., Union, Ala.; W. W. Deal, M. D., Mautua, Ala.; S. E. Deal, M. D., Mautua, Ala.

Personal Notes.

Dr. R. C. Jones, of Abernant, Ala., paid us a call on the 11th.

Dr. L. A. Jenkins, of Cardiff, called while in the city on the 6th.

Dr. Wm. Miles, of Village Springs, was in Birmingham recently.

Dr. W. C. Head, of Johns, was a visitor in the city during February.

Dr. Dicia H. Baker is seriously ill at her home on north 19th street, this city.

Dr. E. C. Bloomer, of Bessemer, came up on business a few days ago.

Dr. J. L. Batson, of Gurnee, Ala., visited Birmingham a few days ago.

Dr. E. M. Sellers, of Searles, stopped over in Birmingham a few hours on his way to Anniston.

Dr. H. W. Harrison, of Dogwood, Ala., was in Birmingham on business on the 4th of this month.

Dr. E. T. Fields, of Ensley, called in passing through the city to Tuscaloosa on February 23rd.

Dr. W. J. Maxwell, formerly of Littleton, has moved to Sheffield to engage in the practice of medicine.

Dr. J. R. Pow, of Maylene, Ala., was in the city on the 1st, having brought a patient to a hospital here.

Dr. Sam Perry, of Marion, Ala., was in Birmingham visiting relatives and friends the first of the month.

Dr. S. C. Carson, of Greensboro, Ala., visited old friends in Birmingham on February 28th and called at the Journal office.

Dr. L. F. Jackson, of Blossburg, was in the city on March 4th attending the meeting of the Jefferson County Medical Society.

Dr. W. R. Callen, of Birmingham, who has been in New York and Baltimore attending post-graduate courses in those cities has returned home.

Dr. O. P. Board, of Louisville, Ky., has recently moved to Birmingham to practice medicine, and has his office on 20th street and 3rd avenue.

Dr. W. A. Burns, of Sheffield, the State Physician Convict Inspector, was in the city on March 4th and attended the meeting of the Jefferson County Medical Society.

Dr. W. D. Sellers, of Kellerman, Tuscaloosa county, called while in the city recently. The Doctor contemplates taking a post-graduate course in New York in a few weeks.

Dr. J. A. Goodwin, of Jasper, called while in the city recently. The

Doctor ranks as the oldest Life Counsellor of the State Medical Association, having been elected at the Mobile session in 1872.

The commencement exercises of the Birmingham Medical College will be held on the 3rd of April. An interesting program is being arranged, and quite a good class of graduates will receive diplomas.

Dr. M. C. Thomas, of Belle Ellen, brought a patient to St. Vincent's Hospital on February 23rd, and called to see us while here. The Doctor is a prominent member of the Board of Censors of the Bibb County Medical Society.

Doctors H. H. Martin, of Savannah, Ga.; Raymond Wallace, of Chattanooga, Tenn.; George C. Savage, of Tennessee, and Michael Hoke, of Atlanta, Ga., were in Birmingham on February 22nd, attending the meeting of Councillors of the Southern Medical Association.

Governor Comer has appointed Dr. Shirley Bragg of Montgomery, formerly President of the State Board of Convict Inspectors, as Inspector of jails, almshouses and cotton factories. This office was created by the legislature in a bill providing for the inspection of jails, almshouses and cotton factories. The annual salary is $2400.

A romance of many years standing culminated on Feb. 28th, at the residence of W. S. Street in Mobile, when Dr. J. J. Harlan, ex-probate judge of Tallapoosa county, now a citizen of Stamford, Texas, and Mrs. Jenny Polk were married by Rev. Mr. McNeill. We extend congratulations and best wishes. There is no one who wishes for them greater happiness than the writer, who was a student of medicine under Dr. Harlan, and who knows him to be a Christian physician of innate modesty, sterling worth and great professional accomplishments. Dr. Harlan was an honored member of the State Association while a resident of Alabama, and is now one of its correspondents. His bride is also known to us as a lady of inestimable character.

Society Reports.

CALHOUN COUNTY SOCIETY.

The Calhoun Society elected the following officers at its annual meeting held in Anniston: President, Dr. W. Y. White, Anniston, Ala.; Vice-president, Dr. M. J. Williams, Oxford, Ala.; Censor, Dr. J. M Whiteside, Anniston, Ala.

WALKER COUNTY SOCIETY.

The Walker County Society, at its annual meeting held at Jasper, elected officers for 1907 as follows: President, Dr. Geo. S. Gilder, Carbon Hill, Ala.; Vice-president, Dr. H. J. Sankey, Nauvoo, Ala.; Secretary, Dr. Titus Manasco, Carbon Hill, Ala.; Censor, Dr. Wm. M. Cunningham, Corona, Ala.; and Health Officer, Dr. A. M. Stovall, Jasper, Ala.

JEFFERSON COUNTY SOCIETY.

The Jefferson County Society upon nomination of its Board of Censors elected Health Officers for the towns outside of Birmingham as follows: Avondale, Dr. S. R. Caffey; Bessemer, Dr. J. S. Winters; Brookside, Dr. F. S. Pugh; Cardiff, Dr. L. A. Jenkins; East Lake, Dr. T. A. Jones; Ensley, Dr. J. E. Robbins; Pratt City, Dr. G. W. Brown; Warrior, Dr. R. L. Mitchel; West End, Dr. W. C. Gewin; Woodlawn, Dr. A. W. Bell; Wylam, Dr. J. H. Edwards; North Birmingham, Dr. E. C. Rosamond; Irondale, Dr. J. W. Howard.

Abstracts.

THE CLINICAL PICTURE.

In these days of exact knowledge the clinical picture is often lost sight of in the judgment of the case. The record of the bowels, temperature, respiration and various pathological reports forming the basis alone upon which the opinion of the attending physician is based.

The importance of exact knowledge cannot be overestimated but it is an error to lose sight of the clinical picture which the patient presents. In the days when the clinical picture alone guided the physician doubtless many errors crept in, and the physician of today will make many errors despite his exact knowledge if this clinical picture is lost sight of.

To the experienced operator the appearance of the patient will often cause him to give a grave prognosis where all the reports pathologically seem to be favorable, and contrariwise he will often give a favorable prognosis where the reports pathological and otherwise, seem to be unfavorable. This knowledge is gained mainly at the bedside and is very difficult of description but should be educated from the very beginning of practice, which is best done by observation of all cases important and unimportant in order that the progress of the case may be noted where the surgical condition is not serious enough to be a menace to life.

Perhaps the most important point in this clinical picture may be summed up as follows: The appearance of the face, character and the expression, restlessness or quietude, mental apathy or alertness, disturbance of the various functions of the body, the character of the skin, whether moist or dry, the character of the pulse and respiration, irritability of the stomach, bowels and bladder, and last but not least, the attitude of the patient toward her condition.

The peculiar appearance presented by cases of hemorrhage, intestinal obstruction, peritonitis and shock vary so greatly where one has observed with care these conditions, that a diagnosis is often possible where exact clinical and pathological aid may be uncertain. Restless-

ness, the mental alertness, the small wiry pulse, rapid and shallow breathing and the fear of impending death of the patient with peritonitis, when once seen can never be forgotten. The mental apathy, the rapid and shallow breathing, the rapid and soft pulse of the patient in shock or hemorrhage present a picture in strong contrast to that of peritonitis.

It is not to underestimate the value of exact knowledge that the clinical picture should be emphasized but rather as an aid in diagnosis, and in judging of our cases we need every bit of help that we can possibly get to form a correct diagnosis. While this is axiomatic it is often lost sight of and errors in diagnosis made.—An. of Gynecol and Pediat.

SHOULD SURFACE SOIL BE STRIPPED FROM RESERVOIRS?

In connection with the plans of the new Catskill reservoirs by the New York Board of Water Supply, the question arose as to whether it would be advisable to strip the surface of the ground which will form the bed of the big Ashokan reservoir of all vegetation and surface soil, with a view to securing a better quality of water. The practice of stripping is advocated by the hydraulic engineers of Massachusetts, and the most notable instance of carrying out this costly method of securing pure water is to be found at the Watchusets reservoir, which impounds over 60 billion gallons of water and forms the main source of the Boston water supply. The new Ashokan reservior will have a capacity of 140 billion gallons; and the New York Board of Water Supply, having in view the great expenditure which would be necessary to strip the bed of the reservoir, referred the whole question to a board of two engineers, who have lately presented an exhaustive report, in which it is shown that while there are undoubted advantages in the practice of stripping, a more effective method of purification is to be found in the construction of filtration plants, through which all the water must pass in its course from the reservoirs to the city's faucets. Moreover, in spite of the most careful safeguards, it has proved to be impossible to absolutely prevent infection of the watersheds from which

reservoirs are filled, and it has come to be recognized that the only effective way to attack the problem is by interposing a filtration plant between the open-air reservoirs and the city to be served, which will not only remove all bacteriological impurities, but also those which are due to submerged and decaying vegetation.—Scientific American.

THE DISSEMINATION OF THE TUBERCLE BACILLI BY INSECTS.

Now that our suspicions are aroused, every bacterial disease is being studied, especially for its relation to insect infection. This is true especially of tuberculosis, although it is well established that the chief means of its dissemination is through the inhalation of dried tuberculous sputum. Carnet demonstrated this fact splendidly some years ago.

The idea that there are other methods of contamination will not down, however, and investigators are pressing every possibility into the searchlight. There seems no logical reason that insects cannot carry the bacilli of tuberculosis. Recently Weber, in an interesting article in the *New York Journal,* published some interesting reports on this subject. Ravenel, in a previous work, has pointed out that tuberculous cows project small particles of sputa containing the bacilli during the act of coughing. Ravenel used a nose-bag, near the bottom of which he put a shelf of soft pine wood which caught the smallest particles, and from these he detected the tubercle bacilli in every tuberculous cow which he examined. Now Weber goes further and studies the insects which are found in the greatest profusion around every stable.

Small forms known as the psocidæ, of the order of neuroptera, were especially examined. These little-known insects are found in the greatest profusion in barns and outhouses where animals are kept. The psocidæ are chewing insects, fancying farinaceous food; hence they live around troughs, granaries, feed-chests, and mangers. The wingless subdivision, the atropedæ, are especially under suspicion. They are famous in literature as the so-called "death watch," and have often been mistaken for lice, as in the case of the Pennsylvania Louse Story

of 1903, when reports were sent abroad that a so-called plague was infecting the eastern part of that State. A tuberculous cow deposits sputum swarming with bacilli mixed with meal all over the woodwork of her stall. These insects at once pounce on this feed and fill their stomachs with saliva, sputum, and meal. They are easily crushed and the contents of their stomach may be conveyed to other animals. Weber found microscopically specimens harboring tubercle bacilli, after a search through three thousand specimens. He held a single page of a newspaper under the bag in a mow and with a few taps caught two thousand specimens of the various species. He injected this ingested material in which tubercle bacilli were found into the peritoneal cavity of guinea pigs and developed tuberculous lesions. Control experiments in which uninfected gastric contents were injected showed no tuberculosis.

These insects occur not only in barns, but in houses, on starched goods, in drawers, in bedclothes, upon walls and floors, and on all kinds of clothing. They are also seen on potatoes, onions, apples, and all sorts of fruit. Weber got one hundred and sixty specimens of the clothilla ocellona from a straw hat which he had worn for three days. He looks upon the common house psocid (bacillus pedicularis) as the most dangerous species, for it feeds in barns in nymph and adult life and swarms into the house in the fall. This insect is often noted over fruit that has been standing for a time, especially on apples, where it hides about the stem and eye of the fruit. This subject deserves more attention than it has as yet received. It deals with a form of insect life which has not been touched upon scarcely in pathological research.—Med. Times.

EXTRAUTERINE PREGNANCY.

At a meeting of the Gynecological Society of Munich, Dr. Hoerrmann gave some interesting data in regard to ectopic pregnancy, of which he had observed 125 cases during a period of 4 3-4 years in Professor Amann's practice. Among the 101 cases which were operated, the left tube was affected 50 times, and the right 51 times. In 82 cases there

was rupture or abortion; in 35 free intraperitoneal hemorrhage; in 43 formation of a hematocele; in 19 death of the fetus with intact sac. In regard to the treatment, the author considered the condition in the same light as a malignant growth. In the presence of hemorrhage into the abdominal cavity operation should not be resorted to during severe shock, efforts being first made to stimulate the heart by injections of camphor or saline infusion. The abdomen should be opened by a small traverse incision above the symphysis, the fetal sac removed, and all readily accessible blood and coagula mopped up with napkins without any thorough cleansing of the abdominal cavity. Among 35 cases treated in this manner there was only one death. An expectant plan was successfully employed in 25 cases in which the hemorrhage was circumscribed. This method, however, was connected with certain risks, such as suppuration or secondary hemorrhage, while recovery was much more protracted. Among 43 cases operated upon for hematocele there was one death from peritonitis in a patient who had previously had high fever. The general conclusions arrived at were: (1) That ectopic gestation was not rare, occurring in 3 per cent. of all gynecological patients; (2) in the diagnosis palpation and the data furnished by the history were of chief importance; exploratory puncture under aseptic precautions was admissible; curettage or the introduction of a sound into the uterus should never be employed; (3) as regards treatment, laparotomy was generally indicated; (4) after severe intraperitoneal hemorrhage operation should be deferred until the relief of shock, and it was unnecessary and even dangerous to remove all the blood.—Internat. Jour. of Surg.

A SENSITIVE TEST FOR ALBUMIN.

Laboratory students in recent years have devoted much attention to the discovery of more exact methods of urinalysis, and many new and improved tests have been brought to light in this way. Others have been hit upon accidentally. Though many of these newer methods will doubtless prove of considerable value to the chemical expert, few of them can ever be utilized by the general practitioner on account of the

technicalities involved. However, reports of the discovery of more sensitive urinary tests are always received with interest by the physician, especially those relating to the detection of albumin or sugar.

Among the various new albumin tests appearing in medical literature during the past year, one of no little importance is that reported by A. Tognetti in one of the Italian journals (*Gazetta degli Ospedali,* Milan, Vol. xxvii, No. 51), the significance of which depends not so much on its greater practicability as upon the fact that by its employment a mere *trace* of albumin is shown. In short, Tognetti's report is entitled to recognition owing to the extremely sensitive re-agent he has discovered.

He describes his method as follows: To a given quantity of urine add an equal quantity of alcoholic solution of tannin (twenty grains of tannin in three oz. of 90 per cent. alcohol). Heat as usual. Then add one-half the quantity of 33 per cent. hydrochloric acid in water. If albumin is present, a yellowish white precipitate is formed.

The above test is not only simple and easily applied, but is the most delicate that the physician can employ. Unlike the ordinary heat and acid test, it is not disturbed by anything except bile. In utilizing this method therefore, if jaundice is present the bile must be removed first by the usual Groceo method; i. e., addition of glacial acetic acid in the proportion of one-fortieth the volume of urine.

One great advantage to be derived from this method of analysis is the possibility of detecting minute quantities of albumin which would otherwise be overlooked. Its employment is recommended in those cases showing a trace of albumin and no casts, and which are prone to eventually develop true nephritis.—N. E. Med. Monthly.

THE TREATMENT OF LA GRIPPE.

P. J. McCourt advocates the use of the tincture of the fresh root of gelsemium. From three to five minims are put into six ounces of water, and drachm doses of this mixture are given every one to three hours. The writer believes that this remedy is practically a specific for almost every stage and variety of la grippe, when free from serious early complications. He has found fluid preparations of the dry root absolutely

valueless. The dose may be much smaller than that indicated above, but should never exceed this amount. In cases of patients who had previously suffered from repeated attacks of influenza, the writer has found arsenic in alcoholic solution very efficient in conferring immunity.—Medical Record, February 23, 1907.

THE OPSONINS.

To one who had the good fortune to hear Professor A. E. Wright, of London, lecture recently before the Harvey Society of New York City can fail to have been impressed by the earnestness and the scientific acumen of this great physician. He discussed the "Therapeutic Inoculation with Bacterial Vaccines," a subject of most momentous interest to our profession today, searching as it is for the best means by which to combat the infectious diseases. Dr. Wright's lecture was but a brief resume concerning his work during several years past upon the opsonins; this work we can but sketch here, referring the reader to the literature for detailed information.

We know, with regard to infections, that there are natural antibacterial resources within the body not to be found in ordinary culture media. The phagocytosis carried on by the leucocytes is now, we believe, a phenomenon quite unquestioned. But in addition to and in reinforcement of this property of phagocytosis are certain properties inherent in the "bacteriotropic substances" of the blood plasma. We would here enumerate four of these properties—the agglutinic, by means of which bacteria are clumped; that of the lysins, which dissolve bacteria; that of the bactericides, which are germ-destroying; and lastly, that of the opsonins.

The precise nature of the opsonins is as yet not known; their presence is manifested by the effects which they produce. They act upon the bacteria and change them in such a way that they are more readily assimilated by the phagocytic leucocytes than bacteria not so treated. And this change is produced by the inoculation of definitely measured bacterial cultures. For example: A case of acne (staphylococcus infec-

tion) was several times inoculated with dead cultures of staphylococci, a complete cure resulting. When the patient was almost well his blood was examined by mixing one volume of it with one volume of freshly washed human leucocytes and one volume of an emulsion of staphylococci. On making smears of this mixture it was found that each leucocyte had engulfed on an average 26 cocci. The same test, when a normal person's serum was used, showed only 13 cocci per leucocyte. The inoculations in this given case had therefore raised the opsonic power of the patient's blood. Regarding the index of the normal individual as 1, that of this patient was 2. Wright's researches have shown that the change is one of the serum and not of the leucocytes. To be effective against a given infection the bacterial culture of the germ concerned in that infection must be inoculated; e.g., that of the bacillus of Koch in tuberculosis, that of the streptococcus in septicæmia, etc. The inoculation of a bacterial culture is followed by a decrease in the opsonic power of the blood ("negative phase"); this drop is then succeeded by an increase to a point above the original ("positive phase"). Too large an inoculation is followed by a very marked negative phase; and the subsequent positive phase is insufficient to restore the opsonic strength to the original point. Several such inoculations, or inoculations given at improper intervals of time, will give an accumulation in the direction of the negative phase, the end result being a lower opsonic index than was present originally. But inoculations well-planned as to dosage and intervals of time will give an accumulation in the positive phase and a higher index than was originally present; this should be the practitioner's aim.

Dr. Wright discussed an interesting case of a boy suffering from hip disease. He had not walked for some time prior to the first blood examination, and was carried into the laboratory. Immediately after the blood was drawn for the first test the boy was made to walk briskly about the laboratory for some fifteen minutes. The blood being then again tested, a sharp drop in the opsonic index was found. Then six examinations made subsequently at twenty minute intervals showed that the sharp drop was succeeded by a rise and that after several more slight

changes the blood showed a higher index than originally. The exercise which the blood had undergone had evidently induced an autoinoculation—the boy's blood had received some tubercle virus. Wright finds that if such patients are allowed to rest quietly in bed they have no autoinoculations and their opsonic power remains low; and they do not do so well. But if they are judiciously exercised or massaged they become autoinoculated and increase their opsonic index; these cases do well.

It is evident to the practicing physician that the greatest care must be taken in employing such means as these. Full many a fatality, as we know, has followed immediately upon violent exercise in a tuberculous patient. This Wright recognizes. He observes that the good which is done by simple surgical interference is probably due to an increased opsonic index produced by the resulting autoinoculation. We may thus explain the benefit which often follows paracentesis for a tuberculous peritonitis. Wright truly believes that disturbances following exercise or an operation, or massage of a tuberculous joint or of a mass of tuberculous glands may be too severe, resulting in increased severity of the disease. But these dangers, he maintains, are avoided in artificial inoculation, scientifically made.

This principle, upon which Wright works, is a sound one. It is now an established fact of the pathology of infections that every bacterium evolves its own antitoxin, which generally remains potent against the particular infection in question throughout the life of the given individual. This is why, for instance, those who have had smallpox or yellow fever need not fear a recurrence; they are immune.

The eminent lecturer referred to the various methods of combating the infections now at our command—the expectant plan; treatment by means of chemical antiseptics; extirpation; treatment by the determination of lymph to the infected region; the Finsen light; Bier's passive congestion; Koch's old tuberculin; the treatment by anti-sera, inaugurated by von Behring. All of these methods, Wright declares, have their very decided limitations and defects. An in this statement he is quite correct, as every practitioner knows, except perhaps with regard to

von Behring's anti-tuberculosis serum. As we have not yet received this product from von Behring's hands, we are not in a position to judge of its merits; we are, however, entitled to hope much for it, recalling as we do the great good which has resulted from his diphtheria antitoxin.

The deliberating reader will conclude, from this sketch, that while the work of our London confrere is worthy of the greatest attention and study, we are not yet in a position to accord it complete approbation. At present the method is so difficult as to be impracticable in general practice; but here, as in all things else, simplification will come with time.—The Medical Times.

HYOSCIN IN LABOR.

After the distressing experiences with scopolamin and morphin anesthesia in surgery it comes as a surprise to find that its use in labor is such a boon to suffering women; at least, a writer in the *New York Medical Journal* has grown enthusiastic over its efficacy. He uses hyoscin and morphin hypodermatically and declares that the labor progresses steadily and normally in every way. Meanwhile the woman sleeps and unconsciously aids the expulsive forces. This sleep may be made to continue throughout the whole of labor, first and second stages, by repeating the dose every four or five hours.

We distrust this remedy and doubt that it will be found superior to chloroform and just as safe.—Courier of Med.

THE CAUSES OF COMMON BALDNESS.

Delos L. Parker states that common baldness accounts for more than 90 per cent. of all cases of baldness. He discusses in this paper a theory that makes common baldness depend for its existence upon a double cause, one being the remote or fundamental cause represented by the absence of upper chest breathing, a condition that allows a poisonous substance to develop in the lungs; the other, the direct or exciting cause, represented by the effect produced by this poisonous substance circulating in the blood. The writer offers much interesting evidence in support of his theory.—Medical Record, February 9, 1907.

Respiratory Diseases

are prone to linger and either become **chronic** or lead to graver maladies

Gray's Glycerine Tonic Comp.

through a specific tonic action on the whole respiratory tract, gives powerful aid in the rapid restoration of normal conditions.

Invaluable, therefore, for arresting the lingering cough or cold.

THE PURDUE FREDERICK CO.
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Excision of the right lung for tuberculosis of that viscus has been successfully done by J. L. Stretton (*Lancet*, July 21, '06). The patient, aged 28, had definite involvement of the right lung with characteristic symptoms. Under ether an incision three inches long was made, with its centre over the third rib, two inches from the sterum. About four inches of this rib was removed. The pleura was found everywhere adherent; the adhesions were loosened carefully with the hand as far as the rib. The portion of the lung above was then surrounded with a serrenœud and cut away, leaving a stump the size of a five shilling piece. For twenty-four hours thereafter the patient was in a state of collapse. During the next few days there was much hemorrhage both from the wound and from the mouth. On the seventh day hemorrhage ceased, but symptoms of sepsis intervened which required a counter opening in the back, through which a large drainage tube was passed. The wire came away on the eigthteenth day and recovery was uneventful. The wound was entirely healed three months later. Soon after this all cough and expectoration ceased. The excised portion of the lung was tuberculous and contained a cavity. Six months later the patient was reported well.

Notice to Physicians.

For Sale!

The magnificent Medical Library of the late Dr. J. C. Le Grande, consisting of over 300 of the latest works by the most eminent authors on every branch of medicine and surgery.

These books were nearly all published within the last fifteen years—most of them since the beginning of the twentieth century.

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Miscellaneous Notes.

NEW YORK SKIN AND CANCER HOSPITAL.

The Governors of the New York Skin and Cancer Hospital announce that Dr. L. Duncan Bulkley will close his clinical course with four special lectures: March 27—Practical Points in the Diagnosis and Treatment of Diseases of the Skin; April 3—Errors in Diagnosis and Treatment; Donts in Dermatology; April 10—Danger Signals from the Skin; April 17—The Significance and Treatment of Itching. They also announce a lecture by Dr. William Seamon Bainbridge April 24—Some Phases of the Cancer Problem; illustrated by a series of cases. The lectures will be held in the Out-Patient Hall of the Hospital at 4:15 o'clock. They will be free to the medical profession.

William C. Witter, Ch. Ex. Com.

OBSERVATIONS ON AN IDEAL LOCAL ANESTHESIA FOR SUBMUCOUS RESECTION.

F. E. Miller describes a method that he has found ideal in his practice. The mixture used consists of about twenty to twenty-five grains of cocaine crystals placed in a shallow dish, to which sufficient adrenalin chloride solution, 1 to 1000, is added to dissolve the crystals. The solution is applied as follows: The cotton on the applicator is wet so that there is no excess of solution. In this way the constrictors of the pharynx are not paralyzed by the treatment. The entire field of operation is swabbed over. The writer has been able to operate for three-quarters of an hour without the slightest discomfort to the patient.—Medical Record, February 23, 1907.

THESE ARE COCA FACTS.

First—Remember that the classic Coca of the Andes—such as the Indians use for endurance against famine and fatigue—is rich in valuable principles which are extremely volatile. This Coca is not to be

found here in the open market. Don't waste valuable time experimenting with inert leaves. Mariani solved this problem nearly fifty years ago when he first presented the medicinal qualities of true Coca in nutritious wine, since known the world over as Vin Mariani.

Second.—Vin Mariani forms as nearly an ideal restorative tonic as it is possible to construct—because Coca supplies the elements of nerve tone, muscular capacity, and withal a depurative which so frees the blood of waste that every tissue is rendered more capable.

Third.—The wine with which this Coca is embodied forms an agreeable medium for preserving these qualities unchanged and presenting them for immediate assimilation.

These facts strengthen the testimony of worth which has maintained Vin Mariani before the medical world during the last half century.—The Coca Leaf, May, 1905.

Sodaville, Oregon, Nov. 5, 1906.

The Anasarcin Chemical Co., Winchester, Tenn.

I received a sample of Anasarcin Tablets some time ago, for which accept thanks. I have been a sufferer from heart trouble, difficult breathing, especially when ascending a height, also dropsy of the feet and ankles for a number of years.

Your suggestion of its therapeutical action indicated that it might be applicable in my case. I commenced their use at once, taking one tablet after each meal. I took no other medicine. It wrought wonders in my case; I am almost well. I have taken a great deal of medicine from time to time but with little benefit until I took this. With my experience with these tablets I feel that they are entitled to all the credit that you claim for them. Your discovery of such a splendid remedy means much in the advancement toward a higher standard of medical remedies.

It affords me great pleasure to recommend your Anasarcin Tablets to patients and to the medical profession.

Respectfully, D. M. Jones, M. D.

Louisville, Ky., Oct. 11, 1906.

The Anasarcin Chemical Co., Winchester, Tenn.

Some time ago I received a sample of your tablets and I am glad to inform you that they have proved very satisfactory to me. Have found several occasions to prescribe them and recommend them very highly. I would appreciate another sample if you care to favor me.

Very truly yours,

John D. Carpenter, M. D.

THINGS GOOD AND BAD.

Dr. Uriel S. Boone, formerly Professor of Pharmacology and Surgery, College of Physicians and Surgeons, St. Louis, says: "There is one thing bad about the grippe. Its victims instead of being rendered immune by the first attack, seem to become more liable to its recurrence. There is one disconcerting feature about it. Its symptoms resemble those of so many far more serious maladies. This country is full of people who are going about darkly ruminating, because of evidences of heart trouble, nervous prostration, dyspepsia, liver complaint and old age, "together with a plentiful lack of wit and weak hams."

"There is one thing good about the grippe. It yields rather readily to the "antikamnia and quinine tablets" treatment. This remedy given in one or two tablet doses, every three hours, with plenty of rest in bed, and among pleasant and quiet surroundings, will work wonders.

"If suffering from nervous headache, nervous exhaustion, general nervousness, muscular aches, irritability or insomnia, administer one "antikamnia and codeine tablet" three or four times a day at regular intervals. Nothing equals this remedy in relieving the organic pains of women, and this without unpleasant after-effect. In these particular cases, prescribe one tablet every hour until three are taken."

ARMY MEDICAL CORPS EXAMINATIONS.

Preliminary examinations for appointment of Assistant Surgeons in the Army will be held on April 29th and July 29th, 1907, at points to be hereafter designated.

Permission to appear for examination can be obtained upon applica-

tion to the Surgeon General, U. S. Army, Washington, D. C., from whom full information concerning the examination can be procured. The essential requirements to securing an invitation are that the applicant shall be a citizen of the United States, shall be between twenty-two and thirty years of age, a graduate of a medical school legally authorized to confer the degree of doctor of medicine, shall be of good moral character and habits, and shall have had at least one year's hospital training or its equivalent in practice. The examinations will be held concurrently throughout the country at points where boards can be convened. Due consideration will be given to the localities from which applications are received, in order to lessen the traveling expenses of applicants as much as possible.

In order to perfect all necessary arrangements for the examinations of April 29th, application must be complete and in possession of the Surgeon General on or before April 1st. Early attention is therefore enjoined upon all intending applicants.

There are at present twenty-five vacancies in the Medical Corps of the Army.

To the Editor:

I take the liberty of sending you a statement of the requirements for admission to the Medical Department of the University of Pennsylvania, which have recently been adopted by the Board of Trustees.

According to the plan finally adopted, the requirements will be increased gradually beginning with the annual session in September, 1908, and reach the maximum September, 1910. The present requirements cover four years graded course in a High School or its equivalent. The essential points in the new requirements are as follows:

I. For the session 1908-1909, in addition to the present requirements, either one of two foreign languages, French or German; (2) Physics; (3) Inorganic Chemistry, including qualitative analysis; (4) General Biology or General Zoology.

II. For the session 1909-1910, in addition to the requirements of 1907-1908, the candidate must have completed successfully work equiv-

alent to that prescribed for the Freshman Class in Colleges recognized by this University.

III. For the session 1910-1911, in addition to the requirements of 1907-1908, candidates must have completed successfully work equivalent to that prescribed for the Freshman and Sophomore Classes.

IV. Candidates who have successfully completed at least three years of an accepted College Course, may be admitted with conditions in Chemistry, Physics, and General Biology or Zoology.

The maximum requirement is two years of collegiate training, including Biology, Chemistry and Physics. The two additional years of Collegiate training are regarded as an adequate preparation for entrance into a professional school. The importance of the candidate having had instruction in subjects leading to the study of Medicine is so generally recognized that Biology, Chemistry and Physics have been added to the requirements. This combination of special and general training is without doubt a much more logical requirement than a Collegiate degree which does not imply any special preparation for medical studies.

Yours truly,

Charles H. Frazier.

THE CARE OF GROWING GIRLS.

One of the most responsible tasks of the family physician is to advise parents of girls entering upon their 'teens, as to the diet, mode of life, and hygienic measures best calculated to preserve the health of budding womanhood. In dealing with these cases the practitioner is often called upon to treat the anemia which in such a large proportion of instances characterizes the unfolding of the growing girl. Full well does the family doctor grasp the meaning of this anemia, and the vast importance of combating it before it is too late,—before the impoverished condition of the blood of puberty has left its imprint upon the powers of resistance of the adult organism; has done permanent damage to the future woman and the future mother.

Unsuitable diet, an overindulgence in sweets or spices, over-study, lack of fresh air and physical exercise, indulgence in late hours and

abandonment to novel reading, to tight lacing, and other abominations of dress, contribute their quota to the causes of anemia in the growing girl. Each of these factors is, of course, removable by good common-sense advice to parents and by proper exercise of discipline. Still, when the damage has been done, we must assist nature in its generous work of restoration, and here it is that we are obliged to give that sovereign cure of impoverished blood, iron, in such form as may best be suited to these cases.

The question as to what form of iron we should give to produce the best possible effects has been solved by both experimental and clinical researches conducted during the past twenty-five years—ever since Bunge and Hamburger experimentally demonstrated the inferiority of inorganic preparations (Morat and Doyen, Trait de Physilogie, Paris, Masson 1904, I, 467). Iron, in the anemia of puberty, produces the best effects when given in a form that will stimulate digestion and increase assimilation, i. e., in the form of the peptonate. With it should always be combined that second hematinic which has been shown to enhance the value of iron,—manganese,—and the two are best given in the form of the well-known solution, styled "Pepto-Mangan (Gude.)"

With this may be given, in the anemia of growing girls, minute doses of Fowlers' Solution, or else equally small doses of strychnia which may be incorporated with Pepto-Mangan as indicated in individual cases.

Pepto-Mangan has a great advantage over the forms of iron medication in that it does not constipate. Girls at puberty, however, are notoriously prone to constipation. Therefore, this should receive proper attention, chiefly in the regulation of diet, including a sufficient amount of fruit, raw and cooked, and of cereals giving a large residue of cellulose.

With this method of treatment many a physician has achieved success which was rewarded tenfold, by the sight of rosy faces and bright eyes.